THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LXXIII. NEW YORK, SATURDAY, DECEMBER 17, 1898. No. 25.

ORIGINAL ARTICLES.

CAMPHORATED TINCTURE OF OPIUM IN CUBAN MALARIA, MIXED MALARIA, AND TYPHOID-FEVER INFECTION.[1]

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AT the beginning of my service at the Roosevelt Hospital on the first day of September, last, I found in my wards 61 cases of Cuban malarial fever in soldiers who had contracted the disease at Santiago. The majority of them had been in the hospital from August 17th. The duration of their illness before coming to the Roosevelt Hospital had ranged between 20 and 40 days. In all instances they had been treated first with quinin, and in a large proportion this had been supplemented by free dosing with Warburg's tincture, and with arsenic.

Subsequent to September 1st and extending to October 20th, 39 additional cases were admitted, making 100 in all, besides a group of mixed malarial and typhoid-fever cases, to be referred to later. Of this list 63 were actively febrile, the temperature ranging from 103° to 107° F. Of these 40 per cent. had chills, with the usual succession of symptoms, but with true intermissions in only 10 per cent. The chills were irregular rather than periodical in the remaining 30 per cent. They seemed in some cases to be double tertian and in some double quartan, but it was difficult to settle this fact conclusively in any of them, as the paroxysms of rigors were very irregular. The remaining 60 per cent. of the febrile patients had no chills, and the course of the fever in them was very variable, the temperature range rising and falling with such irregularity that the curves on the charts were in this respect characteristic of the affection and in marked contrast with those of typhoid fever.

The plasmodium malariæ was found in 90 per cent. of all the cases, in some, however, not until after repeated examinations. The commonest forms were crescentic. Some patients showed relatively large crescents, and some small. These crescents were often very numerous, occasionally markedly so in groups of patients who had been admitted together, as if they had been equally exposed to the same infection. Besides the crescents there were many actively motile extracellular bodies visible which were very small and round in contour. Masses of free pigment were often seen in the field as well as in the white corpuscles. Only one definite separate flagellum was detected, but more might have been found but for press of time.

In their clinical features the most pronounced effect on the patients of the infection was anemia, with emaciation, often extreme. The impoverishment of the blood seemed to be progressive, for it continued in many of the afebrile cases, much as it does in patients with pernicious anemia without febrile paroxysms. The anemia also appeared to be quite independent of enlargement of the liver or spleen. The liver was noted as enlarged in not more than five per cent. The spleen was enlarged in about fifty per cent.

In the great majority of the patients when they were running an actively febrile temperature there was no delirium, but instead a characteristic taciturnity, all questions being answered correctly, but slowly and in monosyllables, the patients remaining wholly apathetic and indifferent to their surroundings. It was upon this particular symptom that the effect of a special medicinal treatment to be mentioned presently was most marked.

After admission to the hospital some 65 of these patients were treated for fourteen days by careful feeding and nursing, in hopes that the change from camp and transport conditions would of itself be beneficial, and, along with this, quinin in doses of from 30 to 60 grains a day was administered, or Warburg's tincture in ½-ounce doses three times a day, while others were treated with arsenic, either alone or added to the other drugs. The general results, however, had been unsatisfactory. In some cases the quinin held the temperature for a few days, but only to be followed by relapses. Its best results were in the small number of patients who showed periodical remissions. Warburg's tincture seemed to be more successful than quinin, but arsenic, though pushed to the production of digestive disturbances, appeared to be of very doubtful effect. Cold baths were used for six patients with high temperatures, but they did not bear the baths well, while the course of the fever not being modified thereby, the baths were abandoned.

The report of this experience of two weeks in the management of these patients led me to try a modi-

[1] Read before the Medical Society of the County of New York, November 28, 1898. For discussion see page 813.

fication of treatment as follows: Fifteen grains of quinin with 15 grains of powdered ginger were administered twice a day, once in the forenoon and once in the afternoon, with ½ an ounce of the camphorated tincture of opium, and a like dose of the latter without quinin at 10 P.M. An ounce and a half of paregoric, equal to 3 grains of opium, was thus taken daily. All the patients with whom this was first tried, 47 in number, were actively febrile, 84 per cent. of them severely so. In order, however, to test comparatively the effect of this medication 14 febrile cases, of whom 65 per cent. were severe, were treated with Warburg's tincture alone, as controls.

The results were as follows: In 22, or 47 per cent., of the number who took paregoric the result was an immediate break in the fever, that is, the temperature fell to normal within 24 hours, nor did it rise again afterward. This effect was the more impressive because in every instance they had been unavailingly treated for an average period of ten days previously without reducing the fever. The treatment was then continued from 7 to 14 days when the men were discharged. Under this heading of reduction of temperature in 24 hours, were 5 patients who had been treated exclusively by large doses of Warburg's tincture without its affecting the temperature. Of the remaining 25 out of the 47, there were ten patients, or about 21 per cent., in whom it took from 36 to 48 hours to reduce the temperature to normal. Of the remaining 15, there were 3 in whom this treatment failed to control the temperature. One of these, however, had a severe chronic colitis, to which his moderate but long-continued fever seemed to be mainly due.

No relapse was recorded in the case of any patient who took the paregoric treatment after the temperature was once reduced to normal. In 1 case it took 3 days before the temperature became normal. Previously, the patient had not been affected by Warburg's tincture. In 5 cases, or 10.6 per cent., the paregoric treatment could not be continued on account of its causing nausea. These patients were then treated by the above doses of quinin and ginger alone, with a relatively slow recovery, except in 1 case which soon yielded to a third dose added to the usual prescription.

The remaining 6 cases out of the 47 proved in time to be cases of mixed infection of malarial and typhoid fever. The differential diagnosis in these patients was at first difficult, but in time was readily demonstrated. Other than among the 5 above mentioned, who could not take the paregoric without vomiting, there were only 2 patients who showed any of the ordinary symptoms of opiates. The remainder had no narcotic symptoms whatever, but quite the reverse, the paregoric seeming to raise them out of their stupor, and the patients almost invariably spoke of their feeling generally much better and stronger immediately after taking it.

To compare now the 14 cases treated with Warburg's tincture: In 2 patients, or 15 per cent., the temperature was reduced in 24 hours. These were both recently admitted patients who previously had been treated with quinin. In 12, or 85 per cent., it took from 48 hours to 10 days to break the fever. Besides these, there were 7 cases in which the Warburg tincture failed to break the fever after 10-days' treatment, though as some of these patients also took quinin they are not included among those who were put on the Warburg tincture alone, as control cases. All of these 7 patients recovered in from 24 to 48 hours under the paregoric treatment after it was adopted with them. Of the remaining 39 out of the total of 100 patients, 26 were admitted as convalescents without any fever. They were, however, in a very reduced state, the greater number being very anemic, and the plasmodium malariæ was found in 80 per cent. of them, often in as large a proportion as in the febrile patients. They were all treated with the paregoric, quinin, and ginger, the same as the febrile patients, with apparently just the same beneficial results, as appears in the following summary of the general effects:

Of the 47 above-mentioned patients treated with paregoric the general condition upon admission was reported as "very weak" in 17, or 38 per cent.; as "weak" in 10, or about 21 per cent.; as "fair" in 20, or nearly 43 per cent. Of these 3 classes, the effect of the paregoric treatment upon the 17 very weak patients is noted as "excellent" in 13, or 76 per cent.; as "fair" in 3, and as "negative" in 1. Among the 10 classified as weak, it is reported "excellent" in 7; "good" in 2, and "negative" in 1. Among the 20 classified as in fair condition when admitted, the effect is reported as "good" in all, with one exception in which it failed to reduce the temperature. Of the 39 afebrile patients admitted as convalescents, about 38 per cent. were in a very weak state. All of these had been treated previously with iron, and some with arsenic as well, for their extreme anemia. Several of these patients were delirious on admission, and it was in them especially that the paregoric seemed to act most promptly in restoring the mental equilibrium and in improving the appetite. In only 4 of the 39 was it reported that they were unable to take the paregoric with benefit. While taking the paregoric they were treated for the anemia with a pill of 2 grains of iron sulphate, 2 of

black pepper, and 1 grain of powdered nux vomica. Among the 14 cases treated exclusively with Warburg's tincture, 2 were classified as "very weak," 5 as "weak," and 7 as "fair." Both the 2 very weak, and the 5 weak patients, were not improved in their general condition at all, and of the 7 in fair condition at the commencement, 2 were made worse and 5 made a fair recovery.

From both the blood examinations and the clinical features of the fever, it is evident that the Cuban malarial parasite with which we had to deal belonged to the estivo-autumnal type, and that its cycle of development in the blood was very irregular in time, so that a corresponding irregularity resulted in the febrile reaction connected with the times of sporulation of the parasite. This would seem to indicate that the specific action of quinin, so well marked in our American tertian and quartan fevers, is best secured during the afebrile periods, or only at certain stages in the life history of the parasite, but that in the more or less continuous forms of malarial fever it loses much of its effect. The only patients among our present group in whom quinin was singly effective were those, as above-mentioned, who had definite intermissions. When, therefore, we have to deal with an infection which does not afford us any regular intermissions the action of quinin is still valuable, but it greatly needs to be supplemented by other remedies. Increasing the doses of quinin in such patients does no good whatever. One patient stated that he took 40-grain doses three times a day, and thought that it made him a great deal worse.

It has been a matter of common experience, especially in the treatment of malarial fevers in the tropics, that the action of quinin appears to be promoted by the simultaneous administration of various spices. The remarkable farrago of compounds in Warburg's tincture, the original formula of which is said to have contained 76 ingredients, powdered snake skins among the rest, doubtless owes much of its efficiency in chronic malarial disorders to its predominant proportion of spices. I have been accustomed, therefore, for many years to prescribe powdered ginger along with quinin, in equal quantities, and I have felt convinced that I can get along with smaller doses of the quinin itself by adding the ginger, in the treatment of our ordinary intermittents. In a number of cases I add pulverized capsicum, 1 grain to 4 of quinin. I have known ginger alone, administered in free doses in hot milk to break up chronic ague of the quartan type, when quinin had conspicuously failed.

Opium is one of the most ancient of remedies in the treatment of malarial fevers, as it was largely used by both the Greek and the Roman physicians. It maintained its position quite down to the period of the introduction of Peruvian bark, and afterward. In the Seventeenth and Eighteenth Centuries it was often prescribed in full doses, generally in tincture form, taken about an hour before the expected paroxysm. In this century it was highly praised by Lind in England, and by Dickson of South Carolina, to break up the cold stage, and Dickson cites approvingly its employment by a number of physicians in our Southern States in the treatment of their so-called bilious remittent fevers, in combination with camphor, administered every three or four hours.

It is interesting to note in this connection some of the conclusions of the British Royal Commission appointed to investigate the opium question in India in the years 1893–94. In this voluminous report of the testimony of 900 persons, in reply to 28,000 questions propounded by the Commission, a large majority of the replies were in favor of the use of opium as a prophylactic and antidote to malarial fever in India. Sir William Roberts, the well known medical author, who served upon this commission, in a paper read by him as President of the Section on Pharmacology and Therapeutics of the British Medical Association, in 1895, maintains that the antimalarial properties of opium are due to its alkaloid, commonly named narcotin, but which he claims should be termed anarcotin, as it has neither anodyne nor narcotic properties, but acts instead as an antiperiodic. The proportions of the two alkaloids in Smyrna opium are: morphin, 8 per cent.; anarcotin, 2 per cent.; while in Bengal or India opium the proportion is morphin, 4 per cent., and anarcotin 6 per cent. Anarcotin, as an antiperiodic, was brought to the notice of the Indian Government fifty years ago as a substitute for the then scarce and expensive quinin by Sir William O'Shaughnessy, 1838, who reported 138 cases of intermittent and remittent fevers treated with it with 65 per cent. of cures. These results, and others of like character, induced the Indian authorities to institute further experiments, and these proving favorable, they caused anarcotin to be prepared in quantity at the laboratories of Ghazipur and Patna, and distributed to the medical depots throughout India. Sir William Roberts then cites two communications on the antiperiodic powers of anarcotin which are based upon a large experience, and claims that they prove incontestably that anarcotin is scarcely inferior, and in some classes of cases is superior, to quinin. The first communication from Dr. Palmer reports the results in 980 patients treated by doses of from 1 to 3 grains of anarcotin. He states that in 70 per cent. the fever was aborted at the second paroxysm

after the medicine was administered, in 20 per cent. the arrest was equally sure, but was not quite so quick, and in 10 per cent. the remedy failed. He further remarks that there are cases in which anarcotin is decidedly more efficacious than quinin, when quinin has been given for a long time without effect. The second report from Dr. Garden on the use of anarcotin in 684 cases of malarial fever in the same district is very much the same as that of Dr. Palmer.

Whether the beneficial effects of the camphorated tincture of opium in the cases included in my report were due to an ingredient of opium capable of acting directly upon the plasmodium malariæ as quinin does, I am not prepared to say. I am rather inclined to the opinion myself that the opiate acted as a stimulant which enabled the system to cope better with the malarial toxemia, and on that account I chose the camphorated tincture in preference to any other preparation of opium on account of its more pronounced stimulating properties due to the addition in the preparation of camphor, benzoic acid, oil of anis, and alcohol. However that may be, the effects of this preparation were in the great majority, as above noted, the very reverse of narcotic, and more like those of both a cardiac and general nervous stimulant.

With reference to the cases of mixed infection of malarial and typhoid fever there were six instances. All of the patients had a history of malarial fever previous to the development of the symptoms of typhoid fever, and in each of them the plasmodium malariæ was found on admission to the hospital. They all ran the usual course of typhoid fever, and in four of them the plasmodium had entirely disappeared from the blood when they became convalescent. The typhoid fever itself was treated according to our ordinary hospital treatment without any quinin throughout. In 2 cases, however, after the patients seemed to be fairly convalescent from typhoid fever, they were attacked with chills and sharp rises of temperature, and with a reappearance of the plasmodium in the blood. However, these soon yielded to the quinin and ginger treatment without paregoric.

Besides these we had 33 cases of typhoid fever in soldiers, 20 from Chickamauga Camp, 8 from Montauk, 2 from Jacksonville, 1 from Tampa, 1 from Santiago, 1 from Thomasville. Of these, 18 were registered as "severe" cases, 6 as "fair," and 9 as "mild." They all recovered except 3, 1 from Jacksonville, 1 from Chickamauga, and 1 from Montauk, whose cases were interesting from the fact that all 3 succumbed while they were apparently convalescing from intestinal perforation. As this is a rare accident, occurring only once in 150 consecutive cases at the Roosevelt Hospital, and here we had 3 cases in the first 27 soldier cases admitted, their histories were investigated, with the result that all 3 had refused to go to their regimental hospitals when they first became ill, preferring to report at drill instead, until they were prostrated by weakness. This record serves to illustrate the danger of walking about while a condition of ulceration is present in the intestine. In 2 of these patients laparotomy was performed by my colleague, Dr. Abbe, as soon as possible after the onset of the symptoms of perforation. The seat of the lesion was found in each, and the intestine resected. One of the men lived 24 hours after the operation, and the other five days.

Besides the 33 soldiers with typhoid, we had 32 other cases of this fever at Roosevelt during the months of September and October, admitted from the city, of whom 18 were males and 14 females. Of these 32 patients, one died, but he was far advanced in the disease, and in a serious condition at the time of his admission to the hospital. I beg leave, therefore, in conclusion, to make a reference to two measures of treatment which I adopted, which may be of interest. Twelve patients were given cold baths with salts and carbonic acid, in imitation of the Nauheim baths, obtained from the Triton Company of Cliff street. The temperature-charts of twelve other patients, as near as possible like them in condition, and at the same fever stage, to whom the ordinary cold baths were administered, were used for comparison. In every instance the effect of the cold Nauheim baths was to lower the temperature for a longer time than the corresponding simple cold-water baths in the control cases. In other respects the effect seemed also favorable, the stimulating cutaneous impression of the carbonic acid appearing to counteract the depression of the cold, though for a time the nurses complained of the prickling of their hands from the gas and the salts.

My second observation is in reference to increasing the elimination of toxic ingredients from the blood in the urine by the diuretic effects of intestinal lavage with normal salt solution. The amount of urine passed in the 24 hours was first measured for two days, and then lavage was employed once a day at 4.30 P.M., with six pints of normal salt solution at a temperature of 104° F., administered by Kemps' rectal irrigator. This was employed in 9 cases. The amount of fluids taken by mouth by the patients was also measured during the 48 hours before commencing the lavage, and they were not allowed to take any greater quantity of fluids daily during the treatment. The result was that in 7 cases the urine was increased from 10 to 20 ounces daily. In 1 case, seen in consultation in private practice, in which

there was albumin in the urine, and the amount passed in 24 hours was only 20 ounces, after the lavage it rose to 48 ounces daily, and the albumin disappeared. There could be no question also that the general symptoms of these patients markedly improved at the same time, but the number is too small to base permanent conclusions upon this measure, though sufficient to encourage further trial. In 1 case it had to be intermitted on account of hemorrhage, and in 1 patient, who was suffering from a relapse, it seemed to be of no particular benefit. The theory on which this procedure is based is that as the greatly increased toxicity of the urine in typhoid fever has been fully demonstrated as following upon a cold bath, so whatever increases urinary elimination may be regarded as contributing to free the blood of toxins. That intestinal irrigation with hot saline water does have a positive diuretic effect I have seen demonstrated often in other conditions, and hence I believe that it may be of service in the management of this particular fever.

THE CUBAN FEVER PLASMODIUM.[1]

BY ROBERT L. WATKINS, M.D.,
OF NEW YORK.

BEFORE showing you the plasmodium of Cuban fever, I will first throw on the screen a photograph of the spherical form of the hematozoa more observed some years ago than at present perhaps.

Next I show you the spherical form found in a specimen of blood taken from a negro off the Gold Coast of Africa and sent to me by Dr. Hall of London some years ago. The blood was some six weeks

FIG. 1.

Melaniferous leucocyte described by Laveran.

coming, yet when it arrived this form of Laveran's plasmodium was found in the specimen, as well as that of the *spirochotæ* of Obermier and which I have not time to show you. The next is the melaniferous leucocyte as Laveran describes it ($\frac{1}{10}$ Zeiss objective), taken from one of two men who had been in Central Africa (Fig. 1).

Now that you have renewed your familiarity with the shape of the plasmodium, I next call to your notice the blood of a Santiago soldier (Fig. 2).

FIG. 2.

Plasmodium present in the blood of a man ill with Cuban malarial fever.

This man, aged twenty-four years, was not sick until he reached home in August. He was then taken with fever and chilliness, but no real chill, the fever fluctuating from 102° to 104° F. and back to normal, irregularly. He had diarrhea, cough, expectoration, and emaciation to such an extent that some of his friends feared consumption. He was, of course, very yellow like the rest; but very little pigment was found in his blood. He was placed on 4 grains of quinin 4 times a day and slowly got better. He was

FIG. 3.

Specimen from a malarial patient at the New York Polyclinic shows the segments of the plasmodium being absorbed and carried away by leucocytes. Fibrin here is also very distinct.

on quinin when this photograph was taken. The germ is of the irregular form of the estivo-autumnal type and, according to Thayer's plates, would come under the head of circular pigment clumps or the pre-

[1] Stereopticon exhibition before the Medical Society of the County of New York, November 28, 1898.

segmenting, the fever of which, according to Osler, is irregular.

Dr. Orin Andrews of Gardner, Mass., whose patient this was, writes me that this man was taken with typhoid fever October 1st, with the characteristic symptoms of intestinal hemorrhage, epistaxis, and rose spots.

The next specimen (Fig. 3) shows the condition of the blood of a malarial patient at the New York Polyclinic Dispensary. He had irregular chills, and at the time the photograph was taken his temperature was 102° F. He was given 4 grains of quinin three times a day. The broken segments in the white cells can be seen quite plainly. Some have been partially absorbed, and therefore are not distinctly outlined.

COMPARATIVE MORPHOLOGY OF MALARIAL PLASMODIA.[1]

BY JAMES EWING, M.D.,
OF NEW YORK.

The Tertian Parasite.—The earliest form of the tertian parasite appears in the stained specimen as a spheroidal or irregularly-shaped, unpigmented body, staining densely, but somewhat unevenly. These bodies are indistinguishable from similar forms of other varieties of parasites. The earliest form of the parasite distinguishable as belonging to the tertian type is an irregular ring-shaped body, exhibiting a distinct achromatic spot, and occasionally a few fine grains of pigment. The red cell is then somewhat swollen.

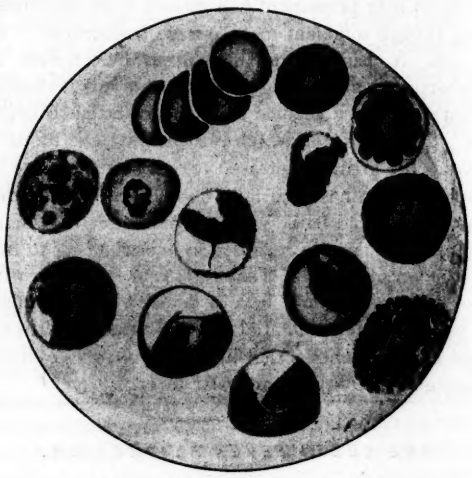
The later stages of the tertian parasite appear in stained specimens as bluish-colored bodies of very irregular shape, depending on the activity of the ameboid motion at the moment the cell dries. The pigment deposit gradually increases, the diameter of the swollen cell enlarges, and the loss of hemoglobin is usually marked.

The body of the parasite stains uniformly bluish, no reticulum being usually visible, although the achromatic spot gradually increases in size.

In the presegmenting forms the body of the parasite exhibits a distinct, deeply-stained reticular structure. The achromatic substance appears to subdivide, and many clear areas appear in the meshes of the reticulum.

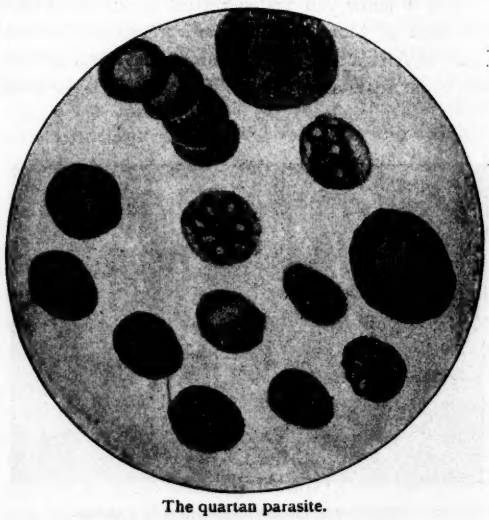
In the segmenting tertian body the pigment is usually, but not always, gathered in the center of the rosette. The reticulum having deepened, the meshes become rounded, and finally break up into fifteen or twenty spores, each enclosing a portion of the achromatic substance. With the rupture of the red cell the new spores and pigment are discharged into the plasma, at the time of the paroxysm. The spores soon enter new red cells, while the pigment is carried to the internal organs, principally the marrow, spleen, and liver, and there englobed by phagocytes. The pigment of the tertian parasite is very fine in the early stages of the organism, increasing in coarseness with its further development, and in the segmenting bodies, coarse blocks may be found.

FIG. 1.



The tertian parasite.

FIG. 2.



The quartan parasite.

The Quartan Parasite.—The quartan parasite is very similar in morphology to the tertian organism. In all except the earliest stages it may be distinguished from the tertian parasite by its higher refractive quality and more sluggish ameboid motion

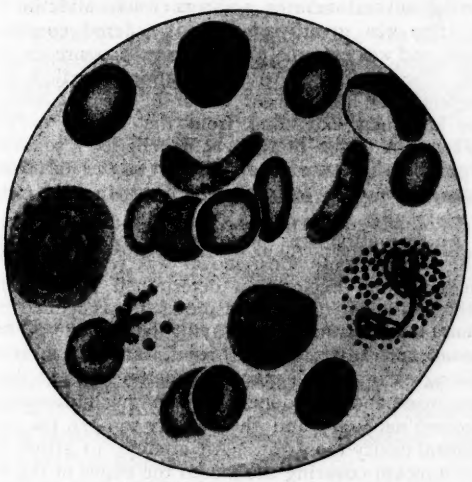
[1] Drawings made and contributed to the MEDICAL NEWS by special request.

in fresh specimens, and by the shrinkage of the cell and presence of coarse pigment grains as seen in stained specimens.

The quartan rosette is very characteristic, and being usually present in the circulation in considerable numbers furnishes the most reliable evidence on which the quartan parasite may be identified. The quartan rosette is smaller than the tertian form, the cell is shrunken but not decolorized, the pigment is coarse and often radially grouped, while the spores number only seven to twelve.

The Estivo-autumnal Parasite.—The estivo-autumnal parasite, or the malignant tertian of Italian writers, is first seen in the red cell, or plasma, as a minute spheroidal body, usually appearing slightly vesicular in stained specimens. Very soon the

FIG. 3.

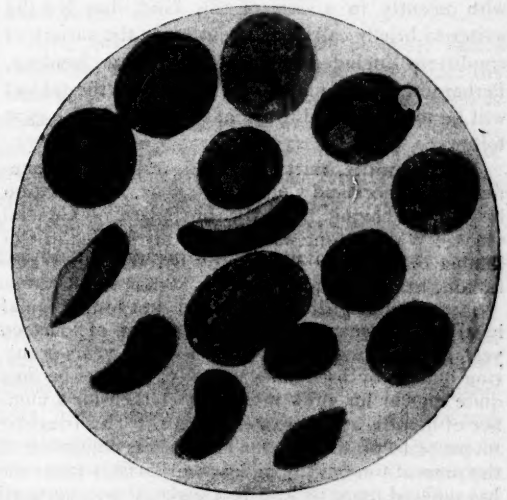


The estivo-autumnal parasite.

spheroidal body becomes distinctly vesicular and usually a densely staining point may be distinguished. Very soon after infection the red cell begins to shrink, but its decolorization proceeds slowly. After a few hours the very characteristic "signet-ring" form of the parasite is found in the red cell. The ring, in properly fixed and stained specimens, is very regular in outline. About one-fourth or one-third of the circumference exhibits a marked thickening, recalling the seal of a ring, while the bow of the ring is extremely fine and geometrically circular. At a variable point in the ring a densely staining point may usually be seen, and in many specimens one or more minute achromatic spots may be distinguished. Double infection of the cell is not uncommon, and occasionally the ring appears to be attached to the surface of the cell, or the bow may project beyond the edge of the cell. Occasionally there is an ingrowth of the parasite from the bow of the ring, but the further development of this peculiar body usually proceeds in the viscera only and cannot be followed in the peripheral blood. In marrow-smears, the body which appears to form the next developmental stage of the ring appears as a distinctly spheroidal parasite, staining deep blue in its peripheral and much lighter in its central portions. It usually occupies about one-half the diameter of the shrunken cell.

While the ring forms of the Cuban malarial parasite are almost invariably non-pigmented, the spheroidal body is nearly always richly pigmented. The segmenting bodies of the estivo-autumnal parasite are found exclusively in the viscera, and especially in the spleen, marrow, and brain. These forms differ

FIG. 4.



Estivo-autumnal parasites.

from the tertian rosettes in being distinctly smaller in size, on account of the smaller size and lesser number of the spores. The number of the spores appears to vary from twelve to eighteen.

Beginning with the pigmented spheroidal body, a second developmental cycle, usually regarded as sterile, seems to occur in established cases of estivo-autumnal malaria. The end product of this cycle is the fully developed crescent, between which and the spheroidal body all transition stages may be readily followed in many cases. The spheroidal body becomes first ovoidal or elliptical, then elongated, and finally crescentic. The adult crescent is a very characteristic form. When deeply stained with eosin it usually shows a reddish stained outer membrane. Stretching across the concavity is a thin, apron-like membrane, which is probably the rem-

nant of the red cell. The body of the crescent stains unevenly, and is usually much lighter at its central portion, where a darkly staining point may sometimes be seen, and where there is an abundant collection of pigment. The pigment of all stages of the crescent is very coarse and distinctly golden-yellow in color. Pigmented mononuclear leucocytes are frequent and of very characteristic appearance in established cases of malaria. The pigment occurs in single grains or in peculiar clumps.

ANCIENT FULL-TERM ECTOPIC PREGNANCY.[1]

BY J. WESLEY BOVEE, M.D.;
OF WASHINGTON, D. C.

THE rarity of old cases of full-term ectopic pregnancy, together with a few interesting matters met with recently in a case of this kind, has led the writer to briefly call your attention to the variety of conditions included under this general heading. Perhaps the best method of presenting the subject will be to recite the history of that case, which is as follows:

Mrs. J., white, thirty years old, residing at Wakefield, Westmoreland County, Virginia, a plantation historic for having been the birthplace of General George Washington, was sent to my service in Columbia Hospital for Women by Dr. William Washington, her family physician, in March, 1898.

During her girlhood she did not enjoy good health. Her menses began at the age of fourteen years, were irregular for the next few years occurring but two or three times annually, but later became quite regular for a few months, and then for a number of months at a time were absent. This irregular interruption of the flow for months has continued to the present time. Living in a malarial region she has suffered more or less from malarial poisoning all her life, and this with measles and other slight diseases, has kept her in bed a great deal. All during her premarital life she was very much annoyed with leucorrhea. She was married at eighteen, and three or four months later had an abortion, which was attributed by her physician to heavy lifting. Her health continued about the same, and twelve months later she was delivered of a female child after a short and easy labor. No physician was present. Previous to its birth her face, eyes, feet and genitals were swollen.

There was nothing of note in her condition until about December, 1888, when she began to have severe pain in her left inguinal region and left hip. A "knot" appeared in this region and gradually increased in size; a little later fetal movements were felt and she expected to be confined in August, 1889. "August 1, 1889," Dr. Washington wrote, "she was in labor, after having all the symptoms of pregnancy, and when I saw her August 15th, a diagnosis of extra-uterine pregnancy was made and the patient advised to call a surgeon." The pains continued about three months, after which period they gradually became less, but occurred with relapses sufficient to keep her in bed. Three years ago she gave birth to a live child, and during this pregnancy seemed to suffer no more than previously. The labor was short and much easier than the first, eight years before. During the following year the patient enjoyed better health than before, but at the end of that time had another relapse and "was just able to drag herself around." Her weakness increased and two months before being admitted to the hospital she was obliged to remain constantly in bed. Two weeks before admission she experienced great pain in the rectum and Dr. Washington removed therefrom the left parietal bone of the fetus which she brought to the hospital. She had been obliged to take quite large doses of morphin at regular intervals during several months and was clearly a victim to it. She was greatly emaciated, suffered constant pain, and was extremely sensitive to pressure in the left iliac region. An examination revealed the presence of a firmly fixed tumor in the left side of the abdomen, extending from the vagina to the spleen. A finger in the vagina elicited a sense of crepitation in the mass so easily felt in the left broad ligament, slightly in front, which was thought to be a fetal skull.

An operation was performed March 10, 1898. The vaginal route for removal was rejected unless an abdominal exploration determined it to be the preferable one. When the abdomen was opened the dense mass was found to be lying behind the peritoneum, and an attempt to reach it by an incision through the extraperitoneal structures in the flank was made and abandoned, as too much dissection seemed necessary and the liability to open the peritoneal cavity too great. An attempt to stitch the peritoneum covering the sac to the edges of the abdominal incision resulted in failure, and it was decided to pack gauze about the abdominal incision and all around the point in the sac wall elected for its opening. The sac was then incised, and from it after long, tedious efforts, the skeleton of a fetus, one or two bones at a time, was detached and removed with a considerable quantity of fecal matter. No other parts of a fetus were found, and no evidence whatever of a placenta was detected. The head was found near the spleen and the relation of the bones with the wall of the sac rendered great care necessary to prevent puncturing the peritoneum. The skin and peritoneum of the edges of the abdominal incision were united with running catgut suture and the edges of the sac wall were in turn stitched to the edges of the abdominal opening. The cavity was then irrigated and packed with iodoform gauze around a rubber drainage-tube. Two quarts of standard salt solution was run into the abdominal cavity to be absorbed. The opening (or openings) between the sac and bowel was not found or searched for, and as was expected, the bowel movements

[1] Read at the Annual Meeting of the Virginia State Medical Society, held at Virginia Beach, Va., Aug. 30, 31, and Sept. 1, 1898.

came through the opening of the sac for nearly two weeks, after which time it began to come through the anus and the fistula to close. April 1st there was scarcely any fecal matter coming through the opening but quite a little pus. April 10th she was gaining rapidly, taking on flesh and color, and walking about the ward free from pain, although she had had no form of opium since the operation. She left the hospital for her home in May in better health than during the previous eight or nine years.

Extra-uterine pregnancy was not well known until the publication, in 1836, of Dezeimeris' classification, and remained a very vague subject up to the appearance, in 1876, of the classical work of John S. Parry of Philadelphia. After these came Tait's house-cleaning work of the pathology of this condition. This form of pregnancy had been occasionally noted, however, for nine hundred years. Many writers refer to Albucasis[1] as being the first to clearly report a case of ectopic pregnancy. He was an Arabian physician, living in Spain, where, about the middle of the Eleventh Century, he saw parts of a fetus escaping through the abdominal wall of a woman by the process of suppuration. During the Sixteenth Century, Platerus,[13] Horstius,[6] Polinus,[15] and Primerose[14] reported cases fairly well authenticated. Those of Nufer[11] and Christopher Bain[3], both classical and overlooked by many historical writers on this subject, occurred about this time. It is probable that Jacob Nufer did the first abdominal section for extra-uterine pregnancy though his operation is considered as the classical first case of Cæsarean section on the living woman. The report of it appears in the collection of Casper Bauhin, and is recorded in Von Siebold's "History of Obstetrics"[16] as follows:

"According to the relation of Casper Bauhin, in his appendix to the Latin translation of Fr. Rousset's writings upon Cæsarian section, Jacob Nufer, a swine-spayer at Sigerhausen, in Switzerland, in the year 1500, delivered his own wife by opening the abdomen and the operation proved successful for both mother and child. The woman was pregnant for the first time and when labor came on and she had already suffered severely for several days, there had gradually assembled at her bedside thirteen midwives and several lithotomists. But all of them together were unable to relieve the poor woman of her child or to mitigate her suffering. Thereupon the husband of the woman proposed to resort to the last means of saving her and assured her that if she would take his advice, he hoped by the blessing of God, to bring the case to a successful issue. She gave her full consent and Nufer persisted further in having the permission of the magistrate to his attempt. This, after some reluctance, was eventually obtained. Nufer next asked those of the midwives who had sufficient nerve for it to assist him in the delivery of his wife, while the more timid ones were requested to leave the room. Eleven of them chose the latter course while two of them and all of the lithotomists remained to assist. The husband first besought the help of the Almighty, then closed the door, laid his wife upon a table and made an incision in her abdomen in the same way he was accustomed in the swine. He opened the abdomen so cleverly at the first incision that the child was safely extracted. When the eleven midwives outside the door heard the baby cry they desired admission, but this was refused until the baby was washed and the wound closed as in the swine. It healed rapidly. She was later confined four times and bore twins. The child delivered by the operation lived seventy-seven years."

Forty years later, according to Donatus, Bain's abdominal operation was deliberately done for the removal of a long-retained fetus. It is described as follows: "In April, 1540, at Castrum Pomponii, commonly called Pomponischi, in the Province of the Lords of Gonzaga, not far from the river Po, there lived a woman whose name was Lodovica, but from her great size termed "La Cavalla." She had been pregnant and the fetus had died in the uterus, while the soft parts had sloughed through the vulva and the bony portions had been retained within her. She recovered and again became pregnant followed by rapid loss of flesh and was reduced to a condition of great danger. Christopher Bain, a traveling surgeon, happened by and offered to attempt to restore her for ten golden pieces if successful and her body if she died. She and her relatives were very poor and most of the money was raised by their good neighbors. The woman was tied up; he slowly cut through the abdominal wall including the peritoneum and at last opened the uterus and extracted the skeleton of a male child; he washed out the uterus with some warm wine and aromatics and after cauterizing the edges of the wound closed it with a suture. She recovered and in a short time had other children born in good condition. Later she had four in all. Witnesses: Dominus John Baptist Zorzonus and Alexander Begher, Dominus Frederick de Filini and Dominus Leonellus Zorzonus, and Antonius Maiochus or Mazzuchinus, and several others present at the whole operation."

This operation was probably for an ectopic gestation and was done fifty-four years before that of Primerose. About this time Platerus did his operation successfully (1594). In 1604, according to Webster,[19] the first case of tubal pregnancy was re-

ported by Riolanus, the younger, and the same author regards the first case of ovarian pregnancy reported to be that of Mercerus, in 1614. But of abdominal pregnancy the first good account was by Josephi,[9] in 1784, and the first clear description of interstitial pregnancy was by Dionis,[6] in 1718. To Madame Lefort belongs the credit of having first reported clearly, in the Eighteenth Century, a case of developed ovum between the layers of the broad ligament, a condition that in 1836 was called by Dezeimeris "Subperitoneo-pelvic" pregnancy. Lawson Tait's investigations led to the determination that practically all cases of extra-uterine pregnancy are originally tubal, becoming other varieties, often by escaping from the tube. His views on this subject are generally accepted by the profession. It is interesting to note that most early writers considered that the fetus had escaped from the uterus, and gave histories of injuries at some date during the pregnancy that had caused such extrusion. Altogether the study of these early cases is very enchanting.

The longest period I have found mentioned during which a fetus had been retained in the abdomen of its mother was fifty-seven years (Nebel's[10]). Sappey[16] reported 1 of fifty-six years, and I found 9 others of more than fifty years; 6 between forty and fifty years; 10 between thirty and forty years, and 43 between eight and thirty years, besides a considerable number in which autopsies on aged women revealed the presence of dead fetuses in various stages of decomposition, and without histories of pregnancies.

The condition of the fetus in ancient ectopic pregnancy is variable, being apparently but slightly dependent upon the length of time it had existed. Bayle[8] removed post-mortem from a woman's belly a fetus in good state of preservation that had been there twenty-six years, and Watkins[18] 1 forty-four years old that was loose in the abdomen and perfectly well-developed and preserved. *Per contra* many cases are found in which trouble has been caused by putrefaction, septic infection, sloughing into hollow viscera, or other depressing condition, within a very short time after the death of the fetus. It would seem that the duration of retention of an extra-uterine fetus of advanced development depends largely upon whether the conception product becomes infected. The limit of time during which these fetal cysts may remain in the abdomen unmolested has not been determined, inasmuch as in a number of the very oldest cases death was due to some entirely irrelevant cause. In about 76 per cent. of cases (Charpentier[5]) infection occurs and Nature attempts to eliminate the foreign material and is oftentimes successful, though in a large majority of them, if unaided by surgery, the women die of exhaustion as a result of pain, long profuse discharges, or sepsis. In the remainder, about 20 per cent., the fetus remains either in a fair state of preservation or is changed by fatty degeneration, absorption of the soft parts, calcification of the sac wall, or other metamorphosis. A true lithopedion of the fetus does not form. Elimination when attempted is, in about half the cases, into some portion of the bowel, nearly as often through the abdominal wall at some point, far less frequently through the bladder or vagina, and in one case[20] through the perineum.

Various authorities have insisted that nearly all cases of full-term ectopic gestation are intraperitoneal. This is not readily reconciled with the preponderance of evidence to prove that the absorption of a young ovum placed in the peritoneal cavity progresses rapidly. Taylor[11] and Webster agree that abdominal intraperitoneal gestation is uniformly fatal (unless removed by abdominal section), primarily by hemorrhage, secondarily by suppuration of the sac, and peritonitis. Of course the amount of hemorrhage may be so slight as to cause no alarm and is usually least when rupture is near the fimbriæ. Again, the fetus may escape in its unruptured membranes into the peritoneal cavity, the placenta preserving its attachment to the inner surface of the tube. Webster, Taylor, and others have recently published views directly antagonistic to this belief, and I believe that while it is possible to retain a fetus sufficiently long in the Fallopian tube for its arrival at such a stage of development that when suddenly expelled into the peritoneal cavity it will resist absorption, and that intraperitoneal pregnancy may occur without passing through the broad ligament, practically all full-term ectopic gestations are, or have been, broad-ligament pregnancies. Either the pregnancy develops and remains extraperitoneal, bulging either the anterior or the posterior fold of the broad ligament, or finally ruptures through the peritoneum into its cavity. The case herein reported, and one I previously recorded[4] were unquestionably extraperitoneal. Dunning's interesting case[7] was of this variety, and many of those reported during the past few centuries were clearly proven to be of this type. It is probable those old cases that opened into the bladder, vagina, or perineum, or into the bowel, as did the one herein detailed, were of this variety, and even some of those opening through the lower part of the abdominal wall may have dissected up the anterior layer of the peritoneum and escaped without ever having invaded the peritoneal cavity.

Another interesting feature of the case herein re-

ported is that while in possession of the old ectopic gestation the woman again became pregnant and was delivered of a living child after a very easy labor. This interesting condition has occurred in at least quite a large percentage of the cases I have studied and, even in a few instances, two different ectopic pregnancies have been found at the operation or autopsy. These were usually of different stages of development, but either of the same date and one becoming blighted first or altogether different as to age.

Parry and others of the early writers on the subject of full-term ectopic pregnancy have been opposed to surgical assistance except when the life of the woman was clearly in immediate danger. But that was before surgical invasion of the peritoneal cavity was so safe as it is now, and the views expressed have been gradually tending toward surgical relief as the routine treatment for this condition. The principal cause of death in abdominal section for these advanced cases is sepsis. It would seem that if the large majority are extraperitoneal, many of them would not require celiotomy. However, if a transperitoneal operation be necessary, then treatment of the sac by stitching it to the abdominal wall before opening it, or when not possible, afterward, would be the most approved plan of procedure when the sac cannot be enucleated. When much denudation of tissue in the pelvis results from cystectomy then drainage through the vaginal roof will be advisable. Although the operation may be performed in a thoroughly aseptic manner, if in these greatly weakened women a space is left in which accumulation of fluids may exude, one must expect its infection before its absorption occurs, and a considerable loss of life to result.

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A SINGLE TEST OF THE VIRULENCY OF SPUTUM KEPT MANY MONTHS.[1]

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THE virulence of tubercle bacilli, as demonstrated by the clinical pictures of pulmonary tuberculosis and the experimental results on animals, presents a very wide range for our consideration; the resistance of these germs against disinfectants is also known to be great, and, consequently, one may expect them to retain their power of infection for many months. Stone,[2] in 1891, reports an experiment in which tubercle bacilli retained their form and virulence for three years. The writer undertook a similar experiment, and with a result so different that he deems it worthy of being reported to this Society.

On February 18, 1896, six guinea-pigs were inoculated with sputum which was secured from an old chronic case of pulmonary tuberculosis with large cavities. Eight weeks later all the animals were killed. General tuberculosis of the glands and of the abdominal and thoracic organs was found in each pig. Large-mouthed bottles half full of sputum stopped with big corks were put away in a pasteboard box on the top shelf of a closet until July, 1897, seventeen months later. The contents when examined were still of fluid consistency, about half the original quantity, of dark-brown color, very little odor, and with considerable deposit. After thorough mixing of this sediment, 1½ c.c. was inoculated into the peritoneum of one and under the skin of a second guinea-pig. The former died in forty-eight hours from some septic poison; the latter lived thirty days, when it was killed. At the autopsy no glandular enlargement and no evidences of tuberculosis were found.

On the same day 2 c.c. of the sediment was mixed with 2 c.c. of sterile water and centrifuged for ten minutes. I thought thereby to obtain the bodies of the tubercle bacilli without the toxin apparently present in the fluid. To this deposit in the tube, after decanting the supernatant fluid, 2 c. c. of sterile water was again added, and equal parts of this was injected into the groins of two guinea-pigs. Twenty-eight days later both pigs were killed, and the autopsy gave a negative result. It should be noted that neither one of the pigs in

[1] Read at the Fifteenth Annual Meeting of the American Climatological Association.

[2] Stone, *Amer. Jour. of the Med. Sciences*, March, 1891.

the second experiment was at all sick after the inoculations; also, that the microscopic examination of the centrifuged sediment did not show any clearly outlined bodies of the tubercle bacilli, but fragmentary masses which retained the coloring matter, and were pronounced to be disintegrated tubercle bacilli by two other examiners in addition to the writer.

Having secured a negative result with this second experiment, one is justified in concluding that the tubercle bacilli in this case were no longer viable, and the following queries suggest themselves: Does sputum which remains in a liquid state for a long time develop toxins which are inimical to the life of tubercle bacilli? Would the result have been different had the sputum been more virulent in its character and taken from a case of acute active tuberculosis? If sputum dries more rapidly, does it retain its virulency longer? These can be answered only by further experimental work; and if the third query should be proven in the affirmative, it will be in accord with other experiments made with dust from rooms long since occupied by tubercular patients, and furnish an added reason for disinfecting and cleaning the habitations of such persons.

CLINICAL MEMORANDUM.

SOME ODD MALARIAL MANIFESTATIONS.

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THE atypical manifestations of malaria may present symptoms indicative of ill-defined perversion of the general health, or they may indicate perverse or defective function upon the part of some organ, simulating local disease of the same, and may or may not be accompanied by other symptoms, oftener due to and easier interpreted as malarial. These many different symptoms of malaria upon the part of organs apparently unrelated, either from an anatomic or physiologic standpoint, showing so little relationship to the common and expected types of malaria, are to my mind best explained by a defective or perverse innervation of function of the parts affected.

That the extraordinarily protean character of malaria is not better understood, odd cases not more readily diagnosed, especially by recent graduates in medicine, is to a large extent due to insufficient attention given this phase of the subject by teachers and authors. It may be that one reason for this is that our teachers and text-book writers mostly live in large cities where malaria is much less prevalent, and perhaps less protean, too, than in the country districts.

An examination of the blood for the plasmodium malariæ is an important, scientific, and advanced means of diagnosis, but obviously not always practical at the bedside, even if the physician has the requisite skill and inclination to make a microscopic examination; and if there is a scarcity of the organisms in the peripheral blood, as is frequently the case for the first few days, it would be a tardy diagnosis if one were to depend wholly upon this means. Again, if one is not suspecting and searching for a malarial origin in conditions which may be atypically malarial the necessity of a blood examination will not likely be appreciated. Considering how widespread and prevalent malaria is, what a large percentage of the average country practitioner's cases are malarial, at least in many parts of this country, I wonder that more attention is not given the subject. To elucidate what I have written I append histories of some of the cases I have seen, with one exception during the past year:

CASE I.—Female, housewife, aged twenty years; previous health good. Became suddenly ill, with all the usual symptoms of catarrhal dysentery presenting, and it was so diagnosed by the attending physician. After one week of treatment by the usual remedies, she being unimproved, I was called. I found her very weak, having very frequent stools, accompanied by tenesmus and composed principally of blood and mucus. Temperature 102° F.; pulse 102. No history of chill or any prominent remissions or an intermission of temperature. It seemed to be a typical case of catarrhal dysentery. Bearing in mind the possibility of malarial infection I questioned closely and the only evidence I was able to elicit which indicated malaria was a periodic exacerbation of the prevailing symptoms. This, together with the fact that malaria was prevalent in the neighborhood, and that I had previously seen somewhat similar cases undoubtedly due to malaria, led me to strongly suspect a malarial origin. I gave her quinin, with a resulting rapid disappearance of all symptoms.

CASE II.—Male, teacher, aged twenty-five years. Had a severe diarrhea accompanied by pain. Temperature and pulse normal. Slight nausea present but no vomiting. No history of dietary error; similar attack two days previously, same hour, lasted a few hours and completely subsided; during interval between attacks felt fairly well. This patient presented the usual symptoms of an ordinary diarrhea, the same being at the time more or less prevalent, and the physician who treated him for the first attack made this diagnosis and treated him accordingly. The element of periodicity manifest in the second attack, the fact that preceding the first attack there had been an initial period of malaise and ill-health, the most prominent symptom of which was "a tired, aching feeling in the bones, arms, and legs," and the absence of any symptoms or history of dietary or other cause led me to diagnose a malarial origin. Quinin relieved the patient and he suffered no subsequent return, as he would have done without an antimalarial agent.

CASE III.—Male, aged fifteen months; weaned; diet principally cow's milk. Severe diarrhea; had lasted three weeks. Temperature 102° F.; pulse 150. This patient, from a near-by city, was sent to the country upon the recommendation of his attending physician with the hope that the change would prove beneficial. The diagnosis of subacute milk infection had been made. By

close inquiry I learned that during the first few days of the fever the mother had noticed for several days at about the same hour, *cutis anserina*, and from this I inferred the temperature had perhaps intermitted during the first few days, but from the statement of the mother there had not been a subsequent intermission or prominent remission. After the first few days the patient presented similar symptoms as those present in the disease diagnosed and led the attending physician into error. Cases similar to the above are not uncommon, both as to symptoms and diagnosis. The only clue to malaria was shown in the first few days, and in this case, as well as in many others, the physician will not obtain a satisfactory history without much cross-questioning, always bearing in mind the possibility of malarial infection. This patient's fever, diarrhea, and accompanying symptoms disappeared under the administration of quinin in twenty-four hours.

CASE IV.—Female, aged thirty-eight years; housewife. Previous health good. Presented usual symptoms, objectively and subjectively, of ulcerative stomatitis. She was nursing her baby at the time, and told me she had "a nursing sore mouth." Concurring in her diagnosis I gave the usual treatment for a week or two, but without good results. Visiting me subsequently I questioned her more closely and learned that previous to her first visit she had had for several days vague and slight periodic manifestations of fever, the same having become more prominent since then. Recognizing a malarial cause or complication I gave her quinin, with the result that she speedily recovered. One year later she wrote me she was having the same trouble with her mouth, had tried several physicians without relief, and for me to send her some more of the same medicine, etc. I did so and she quickly recovered. The following fall she had a repetition of the same trouble and quinin again relieved her.

CASE V.—Female, servant, aged twenty years. Temperature and pulse normal; no history or symptoms of the ingestion of any food or drug likely to produce symptoms present. She presented the typical lesions of urticaria. For a short time she had complained of feeling tired, of aching in her bones, legs and arms, but otherwise did not have any indications of malaria. Quinin gave her complete relief in one day. This therapeutic test, coupled with the fact that I have seen at least twenty similar cases during the past year, most of them affording common and unmistakable evidences of malaria, each responding readily to quinin, in some instances after the failure of other treatment, absence of symptoms upon the part of the stomach, no history of the ingestion of any drug that might produce the disease, leads me to class this case as malarial, and my experience teaches me that in a malarious district nineteen cases out of twenty of urticaria are due to malarial infection.

CASE VI.—Female, housewife, aged fifty years; consulted me last September for a severe acute conjunctivitis, accompanied by an intense and constant supra-orbital pain. No temperature. The usual treatment not affording relief, the supra-orbital pain becoming subsequently periodically exacerbated, led me to try quinin in addition to the local treatment she was receiving and she speedily improved.

CASE VII.—Male, laborer, aged thirty-five years. Previous health good; no temperature; pulse normal. Consulted me for several small ulcers of two-months' duration upon the outer side of the middle third of his left leg. No history or evidences of syphilis or any diathetic condition. No causes or symptoms locally that would account for the ulcers. Previous treatment without results. Continuing the local treatment and giving quinin caused a marked and rapid recovery.

CASE VIII.—Male, farmer, aged thirty years. Previous health good; no family or personal history of rheumatism or neuralgia. Consulted me for a painful but not swollen knee. Had been under treatment for several weeks without relief. I learned there was a periodicity to the painful exacerbations, otherwise the history was negative as to malarial indications. Quinin promptly relieved and cured him.

CASE IX.—Male, coachman, aged twenty years. Temperature and pulse normal. Personal and family history excellent. Presented a typical case of Bell's palsy, of three-day's duration. There were no premonitory indications whatever, neither was there evidence or history to show any trauma or exposure to cold. There were not any ascertainable malarial symptoms previous to the attack of paralysis, but subsequently he had been having fever, so he said, the same coming on about 3 P.M. and being more pronounced the last day as compared to the two previous ones. Knowing that cases of paralysis had been reported as of malarial origin, I gave quinin, with the result that he was practically well in three days.

CASE X.—Male, school-boy, aged sixteen years. Temperature and pulse normal. Of previous good health and of good parentage. Consulted me for a paralysis of the extensor muscles of the right hand of two-weeks' duration. Previous treatment had been without results. There was no evidence or history of any traumatic cause. I treated him without benefit for about two weeks, then he developed a typical case of intermittent fever, and by further questioning I learned for the first time that previous to the paralysis he had had intermittent fever. Putting him on quinin he was greatly improved in three days and at the end of a week was well.

I am aware that some writers are skeptical as to the malarial origin claimed for some of the oddly manifested cases that have heretofore been reported, but in the above cases, with the exception of Case IV., a microscopic blood examination was made and, in each instance, some one or the other varieties of the malarial parasite was found, confirming the suspicion or diagnosis of a malarial origin. In several of the cases it was only after the examination of several specimens that the parasite was found. Some authorities have explained these oddly manifested cases as being complications of malaria and not directly due to malarial infection. If such is the case why do the complications respond so surely and readily to quinin, the complications in question being diseases that usually with the best of treatment require a much longer time to cure?

SPECIAL ARTICLE.

THE GARRISONING OF OUR TROPICAL ISLANDS.[1]

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AT the present moment there is probably no subject of more general interest than that which concerns the health and welfare of those who are to form our army of occupation in our newly acquired territories.

We have just had a sad and bitter experience. Here at home, within easy reach of everything necessary to health and comfort that science could suggest or money buy, widely separated camps have been devastated by most serious epidemics; while in Cuba, for which our troops are now embarking, an army of 18,000 men of magnificent courage and heroic action, has been utterly incapacitated by sickness, and forced to leave to others the field so gallantly won. It is not our purpose to criticise or to comment upon what is past; the readers of the MEDICAL NEWS have already formed an opinion, be it just or unjust, and we need not attempt to strengthen or to change it.

Now that our flag floats over Cuba, Porto Rico, Hawaii, and the Philippines all realize that large numbers of our soldiers must be sent to garrison these tropical and semitropical countries, and that their term of occupation must be an indefinite and perhaps a long one. The question that confronts us is: Must we look forward to the inevitable incapacitation of this large force by disease and death, or is it possible, with our present sanitary and scientific knowledge, for this army to carry on its important work in comparative safety and immunity?

Thanks to natural conditions and Spanish misgovernment and neglect, these countries are the endemic home of typhoid fever, of yellow fever, and of other deadly miasmatic infections. The streets and harbors of Havana and other cities reek with the filth of four centuries, and the labor of cleansing these and making them sanitarily safe will be more truly herculean than the purification of the Augean stables.

What Great Britain has been able to do in the way of reducing and banishing pestilence in her colonies of the Far East, and more especially in Jamaica, so similarly situated, and at one time as unhealthy as these new possessions of ours in the Carribean Sea, is a matter of history. England's experience and success certainly makes it more easy for us. Never have the laws of hygiene and sanitation been so well understood as now. Great strides are being made in improving the sanitary condition of all our large cities, and this same advance can be secured with more marked effect in the places to which reference has been made. The strict observance of a comparatively few simple but important rules and principles will almost certainly protect and preserve the health and lives of the great majority of our army of occupation during its sojourn in these foreign climes.

It is with the idea of formulating and outlining a systematic method of procedure looking to the sanitary care of all engaged that we have ventured to offer the following propositions. We must of necessity leave much of the detail to be filled in by others, but we hope to be able to present the main points in such a way as will awaken and unify the interests of our profession in the main subject. We shall consider later the climate and natural conditions of these tropical or semitropical countries, and inquire as to the extent to which they are responsible for the prevalent maladies.

As far as possible, every preparation should be made for the care and domiciling of our soldiers in these foreign lands even before their departure from home ports. In other words, their camps should be carefully selected, their barracks or quarters should be arranged for, and, whenever feasible, constructed of new materials and in accordance with the dictates of modern sanitation. An adequate water-supply should be provided, and every provision made for its thorough sterilization. Food, medicines, and supplies of all kinds for any emergency should be sent in abundance and in advance, that they may be on hand when the men arrive, and, in fine, everything should be done that the intelligence and unlimited resources of this country may justify.

In the meanwhile, we would offer the thought that the time between now and the departure of the several bodies of troops can be spent in no better way than in giving the men didactic and practical instruction in hygiene and sanitation. This may seem pedantic and pragmatical to some. But it must be remembered that our soldiers are intelligent and, for the most part, fairly well educated, and that, warned by the bitter experience of the past summer, they will be the more ready to observe and obey the orders which their reason commends. Many of them are members of our volunteer service, and many are more or less closely related to some of us. The writer's hospital experience with not a few of them from different States has convinced him that they represent at least something more than the average intelligence of the country. Why not, then, have definite instruction given by officers of the army medical staff, or even by competent persons outside of the military service, both by means of lectures and by practical experiments and demonstrations? Let it be explained to them in ways that they will realize and remember that most of the dangers from disease to which they will be exposed must come to them either in the air they breathe, the water they drink, or the food they eat; that the risks from the latter two can be avoided by exercising moderate prudence and care, and eliminated, with regard to the former, by good ventilation. Make it plain to them that the soil of these countries is the habitat of and is infected with miasmatic organisms, and that to sleep on the ground is to invite attacks of malaria and kindred fevers; and grind it into the very fiber of their mental and physical economy by making them live now as they must live then.

One soldier, to the writer's knowledge, went through

[1] The first of a series of articles relating to the preservation of the health of our army of occupation.

the Santiago campaign with few, if any symptoms of the almost universal fevers that wrecked that intrepid army corps. But, being previously informed, he took the precaution to boil every drop of water that he drank. How many more would have escaped as he did, and how many lives would have been saved, had all his comrades had the same foresight and knowledge, or had they been compelled to observe the same precaution? What better evidence of the advantages of hygienic forethought and sanitary care could we have than that afforded by the marines who were the first to land at Guantanamo, and for ten weeks were exposed to the same conditions as was the larger army within a few miles of them? How was it that their sick-rate did not exceed 2½ per cent. at any time when the larger force had 75 per cent. unfit for duty within four weeks, if it is not that they had proper food and drink, proper clothing, and proper attention? Do not these facts warrant the attempt to give every enlisted man better information in regard to sanitary matters?

Certainly some of those to which such instruction might be given would appreciate it, would try to utilize it, and would profit by it. By their example and evidence, they would also benefit their comrades. The possession of the "first-aid packets" of aseptic dressings, which were supplied to the troops, and the general knowledge of how to use them, certainly saved many lives in the late campaign. Now we must go one step further and teach the men how to guard against disease as well as against the injuries caused by the bullets of the enemy.

The importance of this instruction cannot be overestimated. It is a well-known fact that the Medical Department of the Spanish Army in Cuba was well officered and well administered. The medical records of their military hospitals are models of accuracy and bear evidence on their face of the competency and efficiency not only of the surgeons in charge, but also of their subordinates. The source of their appalling mortality can be traced to the fact that the Spanish soldier, officer and private, was young, reckless, and ignorant. Hygeia, to him, was an unknown goddess and sanitation a myth. Medical instructions and orders were regarded with indifference, and the inevitable results followed. The self-same conditions prevailed throughout our volunteer camps and were attended with similar results. The official orders of instruction issued by the Surgeon-General of the Army were model documents, clear, exhaustive, complete. But neither the privates, the junior officers, nor, it is to be feared, the commanding officers themselves, knew enough to take them seriously and enforce them.

It will undoubtedly be possible in the near future to garrison both Cuba and Porto Rico with American troops with comparatively small risk to the health and lives of those concerned. But it is also more than probable that such safety cannot, at the present juncture, be ensured, and that the conditions must be greatly altered before such a consummation may be attained. The report of the Sanitary Inspector of the United States Marine Hospital Service for Havana for the various weeks, beginning October 1st, states that while yellow fever does not exist to the same extent as it has existed during the past two years, the reason being that during the past eight or ten months but little material has been present on which the fever could feed, on the other hand, malarial fevers in fatal form exist to a marked extent, and enteric fever and enteritis furnish more than one-fifth of the total deaths. He also adds that "the city is even dirtier than ever, if such a thing could be possible."

Admitting that the yellow-fever season in Cuba is almost, if not quite, over at the present time, it is quite possible, indeed, more than probable, that large numbers of men, no more immune than are the majority of our troops, will develop the disease when exposed to the new and peculiar climatic conditions and environments. The lamented death of Colonel Waring also makes us realize that even the highest scientific ability and sanitary knowledge will not insure the medical improvements necessary without some costly sacrifices.

If the troops are to be sent to the cities, can a place where the annual death-rate, though even for a limited time only, is practically *seven* times that of New York or Philadelphia, be in its present condition a proper location for a garrison of American troops? Of course, Havana is not the whole of Cuba nor San Juan of Porto Rico, but it is in or near the large cities that some of the garrisons must first be located to maintain order and establish a permanent government. In confirmation of this, the orders of the Adjutant-General of November 4th, assigning the various corps and divisions to their respective stations, ordered them to hold themselves in readiness to proceed to Cuba, presumably upon short notice. Doubtless, there is full need for this early despatch of many soldiers to Cuba, especially to maintain order when the Spanish troops have been withdrawn.

The Secretary of War has recommended that the Cuban insurgents, in such numbers as may be secured, be enlisted in the United States service, and be officered by Americans. The idea is certainly a good one, and unless there are grave objections to it, which cannot now be foreseen, it should be tried. Many who would thus enter the service would doubtless eventually desire to remain therein, would the quicker learn the full meaning of the principles of our government, and continually tend to lessen the number of our own men needed on the island. England has maintained native West-Indian troops since 1795, and their service has always been, we believe, most satisfactory.

Though the duty of the country is plain before it, and it may not hesitate in its doing, it is also certain that, no matter how much has been gained by this war for humanitarian ends, humanity will not be patient with any management that unnecessarily sacrifices or even jeopardizes the lives or the health of the troops. When the transportation of the various detachments does occur, they may fairly expect to find awaiting them upon their arrival every reasonable preparation and accommodation that the greatest foresight and widest experience can suggest. There can and will be no condoning of any failure to make these provisions and preparations. Now that every one knows from recent experience just what the

dangers are, and that they are real and unexaggerated, the utmost care in the avoidance of them must be taken.

One phase of this great problem relates to the selection of the men who are to form the armies of occupation. The MEDICAL NEWS has already quoted General Lawton as saying that "the American troops are very discontented in Cuba and want to return home. In my mind, the time will never come when the American soldier will serve in Cuba contentedly." Practically the same story comes in the reports from far-off Manila, and, if we mistake not, from Porto Rico. Nostalgia or homesickness is something more than a matter of sentiment, and beyond the reach of the ordinary materia medica.

Consequently, since the going of the soldier to these countries is unavoidable, it becomes the more necessary that everything should be done to make his service and stay reasonably agreeable, and to lessen his discontent. It shall be our endeavor to discover and present in future articles how this may best be accomplished. The American soldier will be expected to undergo hardships when necessary, for that is part of his business and contract, and he would not be an American soldier if he did not. But he may also justly expect in return that the service shall not be needlessly disagreeable or disheartening. It will be remembered that when many of the volunteer regiments entered the Government service, the enlistment of married men and those who had families dependent upon them was discouraged. The thought suggests itself here, and will be more fully developed later, that it may be wise to eventually reverse this rule, and for the purpose of garrison duty to select married men as far as possible, and to send their families with them or to them as soon as provision for the latter can be made. This would cost something, but the results would justify the expenditure in that for many the greatest cause for discontent would be removed. Moreover, this would be a controlling influence in the prevention and regulation of venereal diseases of which we will have more to say hereafter.

MEDICAL PROGRESS.

Cyclic Vomiting.—WHITNEY (*Arc. Pediatrics*, November, 1898) describes a case of cyclic vomiting occurring in a boy eight and one-half years old. There were altogether six attacks, at intervals of almost exactly three months, without any ascertainable cause. Similar cases have been reported by other writers, some of whom have considered that the attacks were due to a uric-acid diathesis, and have treated the patients by salicylates or by some of the lithia waters. The symptoms have been thus described: A child, possibly delicate, but often in previously perfect health, after a prodromal period of twelve to twenty-four hours, is suddenly seized with vomiting. During the prodromal period the symptoms, which are not very pronounced, consist in lassitude, coated tongue, offensive breath, rings about the eyes, loss of appetite, and sometimes a sense of discomfort or distress in the epigastrium. The vomiting is of sudden onset, and often peculiarly severe and uncontrollable. It is excited by the slightest ingestion of food or drink, or it may be independent of either. At first, whatever food may be in the stomach is expelled, and afterward the vomitus consists of a moderate amount of strongly acid-watery mucus, very often streaked with blood. The latter is especially apt to follow the violent and painful retching which is usually present. This vomiting continues at longer or shorter intervals for from twelve hours to four or five days. There is usually a rise of temperature of two or three degrees at the outset, and a slightly lower fever continues until the cessation of the vomiting. Meanwhile, the general condition is often markedly affected, and there is usually a degree of prostration which seems out of proportion to the local manifestations. The abdomen is almost invariably retracted. With the abrupt cessation of the vomiting there is usually a rapid return of appetite and of the normal digestive processes.

The gastric crises occur at intervals varying from six weeks to six months. In any particular case the interval is likely to be always the same, and when the appointed time has elapsed the paroxysm is apt to come on in spite of the utmost care in the avoidance of unwholesome food and psychic disturbances. Indiscretion in these matters may bring on an attack at any time, although the child often enjoys good health in the interval. The real treatment is to strengthen the constitution by an active, out-of-door life.

Hot Air as a Hemostatic.—SCHNEIDER (*Beit. z. klin. Chirurg.*, vol. xxi, p. 805) finds that the ideal hemostatic for parenchymatous organs is one which will produce a thin crust all over the bleeding surface, closely resembling a normal blood-clot. The crusts produced by the point of a thermocautery are apt to stick to the hot iron and tear away from the organ when the point is withdrawn. Chemicals cause thrombosis. Compression with gauze is only occasionally satisfactory. He next tried steam, which had been highly commended by Snegirew. The apparatus was simple, and the results would have been good had it been possible to keep the steam at a high temperature at the point of exit. Unfortunately, he was unable to do this even with a slight pressure in the kettle, and if higher pressure was used the steam and hot water blew holes in the tissues. The surrounding parts had to be kept cool by gauze wet with cold salt solution, and there was considerable danger of producing shock. Finally, it failed entirely to control hemorrhage in divided muscles. He found hot air to work more satisfactorily. The apparatus for this was simple. A Bunsen-burner heated a coil of metal pipe, through which air was blown. It was not possible to have the pipe of exit from the heated coil to the wound more than a few inches long, else the air lost its heat so much as to be ineffectual. When it was working well, and air was escaping at 170° to 200° C. (338° to 392° F.), the current was directed upon the bleeding surface spirally, from the center to the circumference, and rapidly produced a light, tough crust, which could be washed without danger of recurrence of the hemorrhage. No shock accompanied this treatment, and it was proved by a thermometer placed one-fourth of an

inch under the bleeding surface that the temperature at that depth did not rise above 41° C. (106° F.) while the crust was forming, so there can be no question of deep injury of the tissues. The swelling of the organ and the tissues necessary for complete healing was less than when steam was employed. Thus far the method seems to promise much. There are still technical difficulties to be overcome, so that the lamp may be removed to a greater distance from the patient, say from eighteen to twenty-four inches. With this apparatus it was possible to keep up the heat at only half that distance.

Surgery of the Seminal Vesicles.—GUELLIOT (*Centralbl. f. Krank. Harn-und Sexual-Organe*, September, 1898) gives as indication for operative attacks upon the seminal vesicles, the occurrence of inflammation, stone, cancer, or tuberculosis. Old, inflamed vesicles with sclerosis of the surrounding tissues should not be extirpated. If, however, suppuration is present, and the pus, instead of flowing from the duct collects and threatens to break through into the peritoneum or into the perivesicular tissues the abscess should be opened from the perineum. Stones and cysts are not common. When present they should be removed through the perineum. Primary carcinoma of the seminal vesicles has never been operated upon as far as known. Tuberculosis, on the other hand, is the commonest cause of operation. The operative technic is as follows:

1. Lithotomy position with a catheter in the urethra.
2. Incision, concave backward, from the right ischiatic tuberosity to the left.
3. Separation of the urethra from the rectum.
4. Exposure of the levator ani and division of the same upon affected side.
5. Lifting of the anus with hooks and a speculum.
6. The prostate is drawn upward with forceps.
7. Blunt dissection of the prostate and seminal vesicles from the anterior wall of the rectum.
8. Removal of the affected seminal vesicle bit by bit.
9. Control of hemorrhage; suture of the deeper part of the wound; iodoform-gauze packing.

An Investigation of Stitch Abscesses.—TROLLER (*Beit. zur. klin. Chir.*, vol. 22, p. 441) has made a number of experiments in order to determine the cause of stitch abscesses, and the best means of avoiding them. He found that washing the skin with water sterilized it in about one-fifth of the cases; a single scrubbing with a disinfectant sterilized it in something more than one-fourth of the cases, while repeated scrubbings with disinfectants sterilized it in a little over one-half of the cases. In order to test the sterility of the sutures, he employed three kinds —aluminum-bronze wire, silk, and catgut. After a day or more the sutures were removed and tested bacteriologically. Separate tests were made for the portion of the suture embedded in the skin, and for that portion which was outside of the skin. Of eighty-four sutures which were examined in this manner, forty contained germs in their subcutaneous portion, as well as in their outer portion, and twenty-one others contained germs in the outer portion alone. That is to say, that seventy-three per cent. of the sutures contained germs in some portion. As was to have been expected, the results were better when the skin had been repeatedly scrubbed with disinfectants than when only a single cleansing had been carried out. Furthermore, the results with aluminum-bronze were far better than with silk or catgut, nearly three times better than silk, and more than three times better than catgut. The superiority of the wire was due apparently to its impermeability and smoothness. Tests were, therefore, made with silkworm-gut and with a silk made impermeable by gutta-percha. The results with these materials, while better than those obtained with silk and gut, were still inferior to those obtained with wire. Troller was, therefore, of the opinion that the wire possessed an antiseptic action, a view which has been held by other investigators. The bacterium usually found was the white staphylococcus, less often the streptococcus or some bacillus, rarely the yellow staphylococcus. The great majority of germs seemed to come from the skin itself, being either carried in from the surface by the eye of the needle, or following down the track of the suture afterward. In more than one-half of the instances in which the subcutaneous part of the suture contained germs, a visible stitch infection resulted. This was especially true of the catgut and silk sutures.

Albuminuria and Casts Due to Constipation.—KOBLER (*Wien. med. Blatter*, September 1, 1898) speaks of the albuminuria which occurs in connection with cholera. While investigating a case of chronic diarrhea in order to see if the casts were present under those conditions as well as in cholera, he observed that in the periods of constipation which alternated with the diarrhea, the albumin and casts were much increased. Later, he examined a number of patients suffering from some intestinal affection marked by obstipation, and in a number of instances he found that albumin and casts appeared during periods of constipation, and disappeared or became much less when the constipation was relieved. All of these patients suffered considerable pain, and Kobler is inclined to think that there was some causal relation between the two, especially as the pain increased and diminished at the same time as the albumin and casts.

THERAPEUTIC NOTES.

Properties of Podophyllin.—MACKENZIE and DIXON (*Edin. Med. Jour.*, November, 1898) have conducted an investigation into the powers of podophyllin, and find that the active principles contained in the crude resin are two substances, (*a*) crystalline podophyllotoxin, (*b*) podophylloresin, both of which act as excellent laxatives in small doses, without secondary constipation or other objectionable symptoms. Although both these substances act very similarly on the alimentary tract, it is only the podophylloresin which exerts a true cholagogue effect, which shows itself rather by a large increase of the solids secreted than by an increased quantity. Both exert their specific activity when injected hypodermically in alcoholic solution, but in man so much irritation is produced as to forbid their employment in this manner.

The physician should know whether he is prescribing the Indian or the American product, as the former is more than twice as powerful as the latter. The cholagogue effect of podophyllin has been estimated to be greater than that of any known substance.

Treatment of Erysipelas. — WINTER (*Maryland Med. Jour.*, September 10, 1898) says that so-called idiopathic erysipelas is almost always traumatic in character, usually having its origin in some excoriation about the nose or face. Such an attack is usually preceded by sore throat, thus indicating that the germs may find their entrance in this situation. The first treatment should be to induce free action of the bowels, kidneys, and skin. Calomel or some other mercurial purgative, or compound jalap powder should be given and repeated in twelve hours if necessary. For diaphoretic and diuretic purposes the following dose should be given in a wine glass of water and repeated every hour or two as is necessary:

℞	Tr. aconiti rad.	*m.* i—ij	
	Spts. etheris nitr. . . .	*m.* xv	
	Liq. ammonii acetat. . .	q.s.ad.	ʒ ij.

A host of remedies have been suggested for local treatment. Carron oil often gives relief. It becomes offensive in a short time, however, and for this reason cottonseed oil is better than linseed oil. Spirits of turpintine will stop the intolerable burning in a few minutes. In using this medicine locally, a good plan is to dip a piece of flannel in hot water and squeeze it as dry as possible, and then dip it in the turpentine and wring it again, and apply it to the erysipelatous surface for fifteen minutes or longer, according to the sensitiveness of the patient's skin. Ichthyol either in the form of collodion or mixed with vaselin may also be employed. Most patients will require a tonic, such as the tincture of the chlorid of iron, 20 to 40 drops every 2 to 4 hours. The disease is often associated with gastric disturbances so that the diet and stimulants ought to be under the immediate supervision of the physician.

Metatarsalgia and Its Treatment.—JONES and TUBBY (*Annals of Surg.*, September, 1898) do not agree altogether with Morton's theories of metatarsalgia. They attribute the pain which occurs when the fourth metatarsal bone drops out of the arch to pressure upon some nerve between the head of this bone and the skin, and not as Morton claimed to pressure produced upon the plantar digital nerves by their becoming caught between the head of the depressed bone and the adjoining bones. Collapse of the anterior arch, they say, would render the nerve less liable to compression in this situation. Moreover, in many cases, a firm grasp around the foot which raises the arch will relieve the pain. Flexion of the toes will also accomplish the same thing, this, too, raising the heads of the metatarsal bones. Manipulations of the foot other than direct local pressure rarely increase the pain. A callous spot is often found over the head of the depressed bone showing that pressure at this point is considerable. They, therefore, consider that the important factors are: (*a*) The proximity to the painful area of the communicating branch of the superficial division of the internal plantar; (*b*) the collapse of the anterior arch in most of the cases, and (*c*) the fact that the bulk of superincumbent body weight in walking on the toes is borne on the first and fourth toes.

The treatment which is recommended varies according to the degree of the trouble. If the difficulty is slight the treatment is largely preventive and consists in raising the inner aspect of the sole and heel, and wearing thick-soled boots so as to avoid pressure upon the painful spot. These should be made so as to give plenty of room about the metatarsals, while fitting snugly around the instep. Some patients obtain relief by putting a little pad of cotton, or India rubber, or cork inside the shoe just behind the head of the metatarsal bone. If the trouble is more severe, in addition to the measures recommended it is desirable to wear a firm leather band about the instep, which can be laced up so as to give the required support. Baths of hot and cold water, oleates of belladonna and morphin, and massage are useful. If the pain is very acute it is desirable that the patient remain in bed for two or three weeks to give the neuritis time to subside. If the nerve has become chronically inflamed it will be necessary to remove the head of the metatarsal bone. Other measures, such as resection of the nerve, use of the cautery, injections of carbolic acid, etc., are unsatisfactory. The head of the bone should be removed through a dorsal incision, and the patient should refrain from walking until the scar is firm.

Carbonic-acid Gas for Local Anesthesia. — BULLITT (*N. Carolina Med. Jour.*, September 20, 1898) has experimented with carbonic-acid gas as a means of producing local anesthesia. The gas is contained in a storage-drum under a high pressure, 1000 pounds or more. By its expansion when it is allowed to escape intense cold is produced. This is one of the methods of manufacturing ice. In order to produce local anesthesia the gas is allowed to escape through a small brass pipe to the end of which is fixed a fine hollow needle. If this is directed toward the skin a white spot is immediately produced just as when ethylchlorid is used. Ethylchlorid is very expensive, while the carbonic-acid gas costs but little, and the apparatus to contain it can easily be manufactured for three or four dollars.

For Lupus Vulgaris.—KACZANOWKI of St. Petersburg reports complete cures from applications of potassium permanganate which has a potent caustic action on granulation tissue. If there be crusts these are first removed in the usual manner by oil, etc. The affected area is then covered by a layer (2 to 5 millimeters thick) of the finely pulverized drug. If near the eye or nose these must be protected by a pad of cotton and a nasal plug which are removed on the following day when the secretion will have formed a crust with the permanganate. Absorbent cotton and a bandage complete the dressing. The one application destroys the granulations; the eschar comes off in about two weeks and cicatrization proceeds under simple antiseptic dressings, or an ointment containing nitrate of silver may be used to hasten the process. The treatment is painful but bearable.

THE MEDICAL NEWS.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

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Address the Editor: J. RIDDLE GOFFE, M.D.,
No. 111 FIFTH AVENUE (corner of 18th St.), NEW YORK.

Subscription Price, including postage in U. S. and Canada.

PER ANNUM IN ADVANCE	$4.00
SINGLE COPIES	.10
WITH THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, PER ANNUM	7.50

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LEA BROTHERS & CO.,
No. 111 FIFTH AVENUE (corner of 18th St.), NEW YORK,
AND NOS. 706, 708 & 710 SANSOM ST., PHILADELPHIA.

SATURDAY, DECEMBER 17, 1898.

THE GARRISONING OF OUR TROPICAL POSSESSIONS.

IN this week's issue of the NEWS we begin a series of articles on the above subject. The topic will be extended to cover not only the discussion of proper provision for our soldiers who are to be stationed permanently in these tropical islands, but will also include a discussion of the general sanitary measures that are necessary to make them healthful not only to the native population, but also to the large immigration of our own citizens who will doubtless seek these fields, so inviting for new and great financial enterprises. The series will be introduced by several articles trom the pen of Dr. Seneca Egbert, Professor of Hygiene and Sanitation in the Medico-Chirurgical College of Philadelphia, and the author of a work upon that subject. These will be followed by five articles having special reference to Puerto Rico by Dr. Azel Ames. Dr. Ames has already had experience in this island as general inspector of sanitation, and now goes there permanently as the Chief Medical Officer on the staff of General Henry, Military Governor of the island. The succeeding articles and their authors will be announced in due time.

THE PRESIDENT'S MESSAGE AND ITS MEDICAL SUGGESTIONS.

PRESIDENT MCKINLEY'S message to Congress contains the following significant words: "The sanitary problems connected with our new relations with the islands of Cuba and the acquisition of Puerto Rico are no less important than those relating to commerce, finance, and administration."

This assertion is at once a fitting acknowledgment of what sanitary science has accomplished in the past, and a quarantee that its sway shall be still further extended in the future. It is worthy of note that in a presidential message that is concerned with more important matters of state than have been discussed in a message for thirty years, a place should be found for questions of sanitation. It is an index of the prominent place that matters of public health have acquired in this last half of the century. We welcome it also as a just tribute to the unselfish work of the medical profession, which has made questions of sanitation so prominent by demonstrating that the prophylaxis of disease rests exclusively upon it.

The President renews his recommendation that provision be made for a commission of experts to study the situation and advise as to the best means of applying whatever the most recent advances in science can suggest for the protection of the health of our soldiers and citizens; security against the constant menace from the importation of yellow fever, under which our home country suffers will also have the attention of this commission. This suggestion is of course a most timely one and will, we feel sure, be acted upon at once. It is unfortunate, however, that circumstances are such that so important and pressing a matter should be compelled to undergo the delay necessitated by a special appropriation. There should be, there must be established soon, a national Bureau of Health to which, when such serious sanitary problems arise, the Executive may turn as naturally as he now turns to the head of the Treasury Department for the management of questions of finance. The need for such a medical department is constantly becoming more and more clear. Meantime, the Marine Hospital, as far as its powers can be made to extend, has done excellent work in these national sanitary questions. It is to be hoped that at this conjuncture too, its services will be employed as far as possible. For what-

ever tends to put the great problems of national sanitation into the hands of a regularly established bureau of health must be welcomed as an advance in the right direction, as a step toward what must inevitably come, a national department of public health.

HIGH BUILDINGS AND HEALTH.

THE recent fire in one of the so-called "sky-scrapers" in the lower part of New York City again sharply directs public attention to the menace to life and property inherent in such lofty structures. With the utter inability of the present fire-department facilities to cope with a fire in these high buildings, or the fallacy of thinking that any so-called fire-proof building is really fire-proof, we have nothing to do. The holocaust of human lives that will some time, in the not distant future, be offered to the god of Mammon and the goddess of Negligentia, before whom municipal authorities, it is said, in this country at least are prostrate in perpetual adoration, concerns us much more nearly, but is not to our present purpose.

If the modern science of hygiene has demonstrated anything it is, surely, that sunlight is Nature's great bactericide. Six hours of exposure to direct sunlight will infallibly kill bacteria even as resistent as the tubercle bacilli. It is evident that in the past the preservation of humanity from even more prevalent disease than that from which it suffered, has been due to the pervasive influence of sunlight and its wonderful powers as a germicide. If the present tendency to erect high buildings on narrow streets is allowed to continue it will not be many years before the amount and duration of the sunlight capable of entering their lower floors and those of neighboring buildings will count for nothing. A greatly increased morbidity from zymotic disease among those compelled to work long hours in the rayless apartments of these structures where the sun practically never penetrates must therefore inevitably follow.

We venture to say that, even at present, respiratory diseases such as pneumonia and tuberculosis are far commoner among the workers on the ground floors shaded by such buildings than under normal conditions of air and sunlight. There is great danger ahead in this matter. The penalty for the capitalist's greed and the municipality's neglect will fall upon the unconscious and innocent employees. With the amount of territory at present in Greater New York there should not be the slightest necessity for these lofty towers. Let there be a limit to the building heighth then, and let that limit have such a relation to the width of the street on which the buildings are situated that ample sunlight, the God-given preserver of health, shall be secured.

THE SIX-DAY BICYCLE RACE.

THANKS to the careful attention given the matter by the Board of Health, this year's six-day bicycle race has come to a close without practically any of the extremely objectionable features, so manifest at previous contests, coming to the public notice. There were, we understand, on certain occasions quarrels between the contestants and their trainers, a lurking suspicion of persecution, and some complaints that food and drink were being tampered with. In a word, there were present the phenomena which inevitably supervene on brain anemia and the disturbed metabolism of nervous tissue incident to overwork, underfeeding, and the presence in the circulation of an overplus of the products of muscular exertion. The brain anemia seems to have been the prominent feature and the one most easily diagnosed. It was usually the direct result of incipient heart failure, and the men were compelled by the Health Authorities to abandoned the contest as soon as unmistakable and progressive symptoms of this condition became manifest, provided they did not yield promptly to judicious stimulation.

The very significant question presents itself, however, is it worth while that a certain amount of the energies of the Health Department of a great city like New York, where so many sanitary evils are crying out for correction, should be devoted to making an ill-advised six-day bicycle race less objectionable in the public eye? It is a mere money-making exhibit that carries with it great and manifold evils and does absolutely nothing for the healthful sport of bicycling. It has been condemned utterly by the best authorities on these matters.

There yet remains a number of features that make its repetition another year extremely inadvisable. It is the refinement of cruelty to allow human beings to work themselves into the state of haggard exhaustion that was so visible on the faces of the contest-

ants during the last days of the race. The rewards offered, the cheers and interest of the unthinking crowds, and finally the plentiful employment of the strongest known medical stimulants were utilized to arouse in the riders the willpower necessary to enable them to go on notwithstanding their pitiful physical exhaustion. We would not hesitate a moment to pronounce it unjustifiable cruelty if analogous means were employed to make animals do the same thing. The spectacle is anything but an elevating one, and the effect on the crowds who flocked to see it was undoubtedly degrading. Since there is no good reason for its occurrence, except the pecuniary interest of the managers, an enlightened public sentiment should be at once aroused to prevent its further repetition.

AN ANARCHIST'S SENTENCE.

LUCCHENI, the Italian anarchist, who murdered the Empress of Austria last summer in Switzerland, has been sentenced to penal servitude for life. The laws of the Swiss canton in which the crime was committed do not permit capital punishment or doubtless the death penaly would have been decreed. Public opinion would have demanded it. It is far better as it is, for surely no one with any clinical experience in mental diseases can doubt for a moment that the active agent in this extremely deplorable affair is not entirely responsible for his deed. The usual argument of those who insist on the severest possible punishment in these cases is that it will act as a deterrent upon the mentally unbalanced and keep them from putting any insane notion of theirs into action. Experience seems to show that exactly the opposite is the case. To take cranks seriously, to glorify their actions by solemn legal punishment, is in their eyes to make heroes and martyrs of them. Such action encourages rather than discourages imitation. The bathos of committal to an insane-asylum is the best deterrent. To deny their inspiration and their heroism before the world and attribute their action to its true cause, mental disequillibration, is the one thing above all that "cranks" dread; it brings would-be imitators to their senses better than any supposed punishment.

Medical opinion has advanced greatly since the death-penalty was exacted in Guiteau's case in response to the demand for a victim upon whom to wreak vengence. It is clear to our minds that if that trial were to be held at the present time the death-sentence would be the signal for strenuous protest on the part of those members of the medical profession best fitted by their experience to judge in the matter. The advance in medical opinion along these lines is noteworthy. It speaks well for that larger sympathy with mentally deficient or unbalanced humanity that began just a century ago, when Pinel, amidst the breathless suspense of all Paris which wondered what the result would be and portended untold evil, knocked the chains and gyves off the poor maltreated insane inmates of Bicêtre.

The profession and the public are learning to realize that the active agent in many a tragedy is much more to be pitied than to be blamed. Let us hope too that sad experience has taught us the necessity for precautions in those cases in which threats have been uttered. If our larger knowledge but lead to the prevention of these sad tragedies by the suggestion of effective precautions, even to confinement in an asylum, then indeed will the growth of our knowledge in mental diseases be doubly blessed in the humanitarian purposes it will serve.

BRAIN WEIGHT AND INTELLECTUAL CAPACITY.

A BELIEF in phrenology is by no means uncommon among the laity and we are sorry to say that even orthodox members of the profession sometimes show strange leanings toward a modified acceptance at least of the old doctrines on this subject. The conviction, however, that there is a direct ratio between brain weight and intellectual capacity is very widespread among the profession and thinking people generally. A very interesting article by Dr. Joseph Simms in the December number of the *Popular Science Monthly* disposes effectually of any foundation for such a doctrine. The heaviest brain on record, though the case is not well authenticated, was that of a London newsboy who was somewhat idiotic. Its weight was 80 ounces. The brain of Rustan, an ignorant undeveloped Scandinavian peasant, weighed 78.3 ounces, that of a dwarf Indian squaw 73.5 ounces. The heaviest brain among great men was Turgenieff's, the Russian novelist, which weighed 71 ounces. After him comes the distinguished Scotch physician, Dr. Abercrombie whose brain weighed 63 ounces, then General Aber-

crombie and our own General Ben Butler with 62-ounce brains.

The average weight of the human brain varies according to various authorities from the estimate of Austin Flint, who said 50.2 ounces, to that of Professor Krause, the anthropologist of Berlin, who said 55.4 ounces. Considerably below this average in brain weight were such distinguished men as Huber, the philosopher, Grotius the great commentator, Liebig the chemist, Babbage the well-known mathematician and inventor of the calculating-machine, Bishop the mind-reader, and finally, most notable of all, Gambetta the distinguished French statesman, whose brain weighed but 40.9 ounces. Gambetta died from a pistol shot, so that no lingering premortal process drained the normal brain substance of its nutrition. These figures, therefore, show the actual weight of his brain as it was in life.

The average weight of the brains of 60 famous men was 51.3 ounces, that of 10 idiots and 5 imbeciles that are on record, 59.2, a difference of 7.9 ounces in favor of the weak-minded. The explanation so often advanced for increased difficulty of parturition in our time, that with intellectual development the race is acquiring a larger skull, would seem according to Dr. Simms' data to be the theoretic evolution of some advanced obstetrician's inner consciousness. The skulls found in the Indian mounds are larger than the present average skull; those found at Pompeii are larger than the average Neapolitan's of today. May we dare hope that there will be no more theorizing on these two much "be-theoried" subjects without due regard to the facts?

LIFE INSURANCE FOR DAMAGED LIVES.

THE President of the New York County Medical Society in his recent inaugural address touched on a matter of extreme interest to physicians in general, the question of insuring damaged, or as they call them in insurance parlance, "substandard" lives, *i. e.*, persons whose health is in some way impaired and who would not under ordinary circumstances be accepted as risks by life-insurance companies. It has long seemed to thinking medical men that a field for the extension of insurance benefits without loss to the company existed in this direction. This discussion of the subject, therefore, is cordially welcomed because it comes quasi officially and is an index of present tendencies in life-insurance circles.

Medical men have long felt that among those rejected by insurance companies there are a number of people who constitute good risks and whose expectancy of life is not below the average, people with tubercular family histories yet healthy themselves, or with the personal history of some phthisical manifestations years ago but now in good health. Not a few of them are affected with a slight heart lesion, often with only a heart murmur (it is sometimes forgotten that the terms are not identical in meaning) but with never a symptom of disturbed compensation, or with an albuminuria without casts or some of the other not clearly significant manifestations for which insurance companies deem it wise to reject applicants.

Most medical men, too, have been of the opinion that the present system was unfair in certain ways. Actuary statistics of the expectancy of life of the whole population, are, we believe, used to determine premium rates, while policies are issued only on the select lives that have no defects and whose expectancy of life, therefore, at any given age is considerably greater than the average. It has even been said that the present profits of the life-insurance business and its ability to pay magnificent salaries was due to this fact. We are glad to think that this opprobrium, if it has any real basis in fact, is about to be removed.

From a purely medical standpoint we welcome the heralded innovation for two reasons. The consciousness of a provision for their families will be a remarkably steadying therapeutic agent for certain nervous patients whose neurotic symptoms manifested in functional heart murmur, or cyclic albuminuria, have in the past led to their rejection by insurance companies to the no small detriment of their state of mind and health. The second medical advantage certain to accrue from it is that the careful study of these damaged lives will build up scientifically the precious study of prognosis, so important in itself, so much studied by our medical forbears, but advance in which has not kept pace with the progress in other departments of clinical medicine.

MALARIAL NEPHRITIS.

THE careful study which, since the discovery of the malarial parasite, has been devoted to malarial

infections and their complications, has practically laid the basis for a scientific knowledge of the disease. Despite all the work done much remains to be accomplished. During the last year or two, exclusive of the contributions to our knowledge of the life history of the parasite, the most interesting progress has been made in the line of the pathologic changes induced in the kidneys by the elimination of the toxic products of the disease.

Hirsch, the great medical geographer, relying on the statement, supported as it seemed to be by statistics, that Bright's disease was not common in India or Brazil though malaria was there endemic, expressed the opinion that there is no etiologic connection between malaria and nephritis. Further study, however, has shown that this opinion is not entirely true.

Malarial nephritis has been found to be much more frequent than was formerly thought. As usually happens in medical matters, however, the pendulum of medical opinion swung a little too far. Exaggeration of the frequency and seriousness of nephritis complicating malaria took the place of former failure to recognize it. Albuminuria during malaria has been so commonly found when carefully looked for that the conclusion has very naturally been entertained that actual kidney lesions must be frequent. Two recent thoroughly conservative reviews of the question do not support this conclusion. One of them is Dr. Thayer's article on "Nephritis of Malarial Origin," in the November and December numbers of the *American Journal of the Medical Sciences*. It must be considered as expressing the views of the Johns Hopkins School in the matter; and of late years it is to the latter that the profession in this country has learned to look for the best scientific opinions on malarial questions. The other discussion of malarial nephritis is from the Roman School, by Dr. Giacamo Rem-Picci in *Policlinico*.

Dr. Thayer notes the finding of albuminuria in malarial fevers in 46.4 per cent. of the cases treated at Johns Hopkins. Acute nephritis occurred in only 1.7 per cent. It is interesting to note how much severer on the renal functions and apparently also on the kidneys themselves is the effect of that type of malaria which is at present receiving so much attention, the estivo-autumnal form. Of the cases infected with this form of the malarial parasite albuminuria occurred in 58.3 per cent.; acute nephritis occurred in 4.7 per cent. of the cases treated in the wards, the severer infections, and in 2.3 per cent. of all the cases seen.

Dr. Rem-Picci, at Rome, has been very careful to exclude all cases except those in which the albuminuria was observed to set in during the malarial infection. There are so many other possible sources of kidney irritation that he very properly considers that care in this matter is most necessary. He has evidently excluded all cases too, in which only traces of albumin were observed, for he has found albuminuria in only 6 per cent. of the cases. In more than 7000 cases of malaria in the hospitals of Santo Spirito and San Giovanni, at Rome, he has found acute nephritis in 80 patients, just about 1.1 per cent. It is very interesting to note that these figures agree almost exactly with Dr. Thayer's, for among white patients, as we note farther on, he found acute malarial nephritis in 1.1 per cent. of his cases. He does not attribute the nephritis so much to the malarial parasite itself or any toxins secreted by it as to the toxic influence of the unusual metabolic products that arise from altered physical conditions during the attacks and which must be eliminated afterward. This is based upon the findings of Bacelli, who has shown that after a "chill" there is an increase in the specific gravity of the urine, and certain products of abnormal tissue-metabolism are demonstrable in it. Dr. Rem-Picci considers that in healthy individuals with normal kidneys this will not cause nephritis though it does in the less resistive. A curious confirmation of this opinion seems to be found in Dr. Thayer's observation, that while nephritis occurred in white patients in only 1.1 per cent. of the cases of malaria, it occurred in negroes in 7.3 per cent., "figures," he adds, "which are quite in keeping with the clinical fact often noted at Johns Hopkins, *viz.*, that the colored race is much more susceptible to renal disease than the whites."

On the whole acute nephritis cannot, as a rule, be attributed directly to the presence of the malarial parasite, and the question of chronic nephritis is so involved with other factors that scarcely more than the suspicion of the causal relation of malaria to it can at present be entertained.

At Rome medical men are perfectly outspoken in advocating the use of quinin in malaria, even in the cases complicated by nephritis. A recent editorial opinion in the *Journal of the American Medical Association*, based absolutely, so far as we can see, on no good or convincing reason, is calculated to do much harm. The journal advises against quinin. On the contrary, at Rome, where the profession has unusual opportunities for studying this malady, quinin, in all cases, is invariably considered indispensable. Cases are on record in which albuminuria and hemoglobinuria have increased when quinin was for a time withheld and later have diminished and finally disappeared with the malaria when the quinin treatment was energetically pushed.

ECHOES AND NEWS.

St. John's Guild of New York.—By the recent gift of $32,000 this Guild is enabled to construct another floating hospital for the benefit of the children of the sick poor. It will be ready for use next summer.

Major Booth Resigns.—Major Burton S. Booth, Surgeon of the 203d New York Volunteers, has resigned his commission in the army and returned to his home in Troy, N. Y., where he will resume his practice.

Dr. Sanger Brown—A Correction.—Attention has been called to the statement made in the last issue of the MEDICAL NEWS regarding Dr. Brown's resignation from the faculty of Rush Medical College, Chicago. The chair which he formerly held, and from which he resigned, was that of Medical Jurisprudence and Hygiene.

A Case of Lacerated Spleen.—A helper in the Bellevue Hospital Medical College died recently in the hospital of a disease which the physicians had not been able to diagnose during his two-month's sickness. Dr. Herman M. Biggs performed an autopsy, and discovered that the chief cause of death was a laceration of the spleen; cause of the latter unknown.

The Sick and Dead at Manila.—During the last week there were reported 1991 sick at Manila, against 1922 during the preceding week. The deaths were: From typhoid fever, 1; dysentery, 3; melancholia, 1; suicide, 1; and smallpox, 3. A convalescent hospital is about to be established on Corregidor Island, in charge of Major Owen. It will contain 100 beds.

Typhoid from Bad Milk.—There is an outbreak of typhoid fever in an uptown district of New York City bounded by Mott and Walton avenues and 138th and 152d streets. There are seventeen cases in the district, and all but four of them arose from infected milk sold by a grocer in the neighborhood; the rest, it is said, are cases of men who brought the disease from some of the army camps.

"Dr. Therne," by H. Rider Haggard.—Under the above title this popular author has just published a book dedicated to the Jenner Society in which he sets forth in characteristic style the lamentable consequences which he foresees must follow the recent antivaccination legislation in England. The humiliation and shame which overtake "Dr. Therne," who has deserted his principles and gone over to the antivaccinationists, are depicted with tragic force in the closing chapter.

Obituary: Salmon P. Cahen, M.D.—The Medical Board of the West Side German Dispensary of New York and the faculty of the New York School of Clinical Medicine, at a joint meeting, recently adopted resolutions upon the death of their colleague, Salmon P. Cahen, M.D., former secretary of the medical board, expressing appreciation of his nobility of character, his scientific attainments, and his devotion to the sick poor. It was resolved that his death was to them an irreparable loss.

"The Medical Age" and Osteopathy.—For some time it has been thought by the parties interested and by their friends that the suit begun by an osteopath against the editor of *The Medical Age* was only a bluff and an advertising ruse, especially as the plaintiff failed to provide security for the costs of the action. It appears, however, that the security has finally been given and that the case will shortly come up for trial. We bespeak for the defendant the sympathy of the entire medical profession of the country and shall watch the progress of the case with no little interest.

The New York German Medical Society.—Die Deutsche Medicinische Gesellschaft celebrated its thirty-eighth anniversary with a banquet at the Arion Hall, Saturday evening, December 10th. Dr. Abraham Jacobi presided most felicitously as toastmaster, and by his happy presentation of the toasts called forth most spirited and interesting responses. An interesting feature of the occasion, and somewhat unusual at medical society meetings, was the presence of the doctors' wives who lent a charm and grace to the occasion, especially in the social features which followed the banquet.

The New Jersey Sanitary Association.—The twenty-fourth annual meeting of this society was held at Lakewood, December 9th and 10th. The president, Vernon L. Davey, superintendent of the East Orange public schools, gave an address on "The Relation of the Schools to the Health of the Community." "It is coming to be felt by practical educators," said Mr. Davey, "that there should be some sort of supervision of the physical side of the pupil—not merely in the way of giving a few minutes daily to light calisthenics, but in securing a frequent, professional observation of the pupil's physical condition."

Solvent Action of Water on Metals.—Robert Meldrum in a recent number of the *Chemical News* reviews the generally accepted opinions as to the solvent action of water upon copper and lead vessels and pipes, and details some personal experiments. It confirms the opinion that a "soft" water dissolves much more lead than a "hard"

water. A slight amount of carbonic acid does not add to the solvent action of the water but the presence of large amounts of CO_2 causes the water to take up lead in considerable amounts. The importance of this fact in connection with the tubes and fittings of so-called "soda-water" apparatus is evident.

Suicides in Italy.—Suicides in Italy during the year 1896 show an increase of fifty per cent. over the ten preceding years. The total reaches 2000, which gives a mortality of 6.41 per 100,000 inhabitants; of these 2000, 1404 were men and 596 women; 813 were married, 884 single, 177 widowers, and 61 widows. Three causes of the increase are given: the greater difficulty of earning a livelihood, the growing burden of taxation, and the spread of education, which in many cases leads to much unsatisfied ambition. The districts where suicide was most prevalent are those where education is most developed; in the provinces where education is, if anything, neglected, the proportion attained is scarcely two or three per 100,000.

Temporary Ectopia Cardis.—The *British Medical Journal* recalls Surgeon-General Jameson's story at the Virchow dinner of the officer who, wounded in the region of the heart, received no wound of the heart, perhaps because that valued organ was at the moment "in his boots" and the MEDICAL-NEWS story of Ex-Governor O'Farrell of Virginia, who attributed his escape from fatal injury under like circumstances in our Civil War, to the fact that "his heart was in his mouth" and suggests that temporary ectopia cardis would seem to be a not infrequent condition among warriors "when the drums begin to beat." All that has been wanting to set these cases on a proper medical (or is it surgical?) footing was a scientific title. Now they have it.

Continued Decrease in the Population of France.—The official reports of the Ministry of Commerce on the French population have just been issued for the year 1897, during which the total number of births was 859,000, as against 865,000 births for the year 1896. In military and colonial circles the apprehension caused by this decrease is further emphasized by the discovery that the French population contains a smaller number of men and women of what are termed the able-bodied ages, namely, from fifteen to fifty-years in the case of men, and to forty-five in the case of women, than it did thirty years ago. The number of men capable of bearing arms, which has been stationary for forty years, shows a slight falling off, even after due allowance is made for loss of territory.

Dinner of Medical Alumni.—The alumni of the College of Physicians and Surgeons, New York, had a dinner on the evening of the 8th inst. Drs. Gibbs and Lehmann, alumni who died in the late war, were eulogized. Dr. Charles McBurney, in the course of a diverting speech, said: "I am perfectly willing to admit that the College of Physicians and Surgeons is the finest and best-equipped plant for medical instruction that was ever erected; that it is reported to have the most capable, skilful, and learned corps of instructors that were ever gathered together; but as for me, I am of the old school." From this it is evident that he is far from being in sympathy with the new and so-called "advanced" ideas of medical teaching.

Sir William Jenner's Death.—Sir William Jenner, the distinguished English medical man, died December 12th. He was President of the Royal College of Physicians of London from 1881 to 1889 when he retired from the practice of his profession. He had been Physician in Ordinary to the Queen since 1862 and to the Prince of Wales since 1863. His work on the differentiation of typhus and typhoid fever is well known. In 1894 the Maxon Medal of the Royal College of Physicians, which is given for distinguished services in clinical medicine, was conferred upon him. Sir William Jenner was nearly eighty-four years old, having been born in 1815 in Chatham, and began his medical career as a general practitioner. His first hospital appointment was as Surgeon Accoucheur to the Royal Maternity Hospital.

The Meeting of the American Society of Naturalists.—The principal meeting of the American Society of Naturalists which, as we have announced before, is to have a series of meetings in New York City during Christmas week, will be held at Schermerhorn Hall, Columbia College on December 29th. An address of welcome is to be delivered by President Low and then short papers are to be read on "Advances in Methods of Teaching" by the following heads of university departments with special reference to their branches; Zoology, Professor F. G. Conklin of the University of Pennsylvania; Anatomy, Professor George S. Huntington of Columbia University; Physiology, Professor W. T. Porter of the Harvard Medical School; Psychology, Professor Hugo Münsterberg of Harvard University; Anthropology, Dr. Franz Boas of Columbia University; Botany, Professor W. F. Ganong of Smith College.

"Archives of Pediatrics."—The December number of this journal closes the fifteenth year of its existence. With the beginning of the new year E. B. Treat & Co. of New York become the sole proprietors of the journal, having purchased the interest of its founder and former owner, William Perry Watson, M.D. The present editorial management, however, continues the same. In closing the fifteenth year of its existence the editor indulges in some reminiscences upon the growth of that specialty. He says: "The launching of a pediatric journal fifteen years ago was a difficult and hazardous undertaking and its success was only achieved by the energy and determination of its founder. Without a pediatric society in the land, or even the section of a society to stimulate men to special work; without a full professor of pediatrics in any medical college, or any organized body of teachers or workers, the difficulties of maintaining a special journal were indeed great. The *Archives* has been a potent factor in combining and solidifying the diffused elements which now go to make up the specialty of pediatrics."

Shorter Hours for Drug-Clerks.—The occurrence during the past week of the substitution in a prescription of

atropin for morphin, which was noted in last week's issue, was followed by serious, but fortunately not fatal, symptoms. Attention is called to it once more for the purpose of emphasizing the necessity for the strictest enforcement of the regulations already existing as to short hours of service for drug-clerks. There can be no excuse for a mistake committed because weariness supervened after too long service, the resultant inattention causing fatal substitution. The clerk in the prescription department must during hours of service ever be thoroughly wakeful. His position is in a lesser degree as important as the train-despatcher or switch-tender and lives are often dependent on careful and supremely intelligent service. The Druggists' League for Shorter Hours has a ten-hour bill to be introduced into the next New York legislature and it is to be hoped that the united efforts of medical and druggist influence will bring about its passage. The movement has our heartiest sympathy and its object our most cordial commendation.

Preparations for Burial after Only Apparent Death.—An inmate of the Dodge City Soldier's Home in Kansas is said to have been pronounced dead by the physicians and to have been prepared for burial. He revived after having been put in his coffin, and is now said to be on a fair way to recovery. He has no recollection, it is reported, of any sensation during the time he lay apparently dead except a confused feeling of hunger and a distinct iciness about his feet. This is one of those cases of preparation for burial of the living which are reported every now and then, usually from some obscure out-of-the-way place. Investigation practically always shows that they are a figment of some reporter's vivid imagination. They disturb very seriously the peace of mind of certain nervous people and are a source in this way of a good deal of needless suffering. We have written to the superintendent and the medical attendant of the Dodge City Soldier's Home, and shall report the real facts of the case to our readers if it is possible to obtain them. We shall always be glad to report the exact details of such cases, and especially of the correction of errors in this matter so common in the daily press.

The Truth about Vaccination.—Dr. Bizzozziro, in a recent lecture delivered at Rome, recalled strikingly to his audience the success of vaccination in Germany. He said: "Germany stands alone in fulfiling in great measure the demands of hygiene, having in consequence of the calamitous smallpox epidemic of 1870–71 enacted the law of 1874 which 'makes vaccination obligatory in the first year of life and revaccination also obligatory at the tenth year.' What was the result? With a population of 50,000,000, having in 1871 lost 143,000 lives by smallpox, she found by her law of 1874 the mortality diminished so rapidly that to-day the disease numbers only 116 victims a year. These cases, moreover, occur almost exclusively in towns on her frontier. If it were true," continued Professor Bizzozzero, "that a good vaccination does not protect from smallpox, we ought to find in smallpox epidemics that the disease diffuses itself in the well-vaccinated no less than in the non-vaccinated countries. But it is not so. In 1870–71, during the Franco-German war the two peoples interpenetrated each other, the German having its civil population vaccinated optionally, but its army completely revaccinated, while the French (population and army alike) were vaccinated perfunctorily. Both were attacked by smallpox; but the French army numbered 23,000 deaths by it, while the German army had only 278; and in the same tent, breathing the same air, the French wounded were heavily visited by the disease, while the German wounded, having been revaccinated, had not a single case.

Report of the Austrian Commission on Bubonic Plague.—The Imperial Academy of Science of Vienna has given out the report of the above commission. It will be remembered that the lamented Dr. Hermann Müller, who recently fell a victim to the plague at Vienna, was a leading member of this commission and executed and described the principal scientific work. According to him, the experience gained during the last epidemic shows the development of the bubo to be one of the first symptoms of the disease and to precede the earliest appearance of the violent disturbance of the nervous system. Clinical observation leads strongly to the conclusion that the disease originates in an infection through the skin, which remains localized for a time. The general affection afterward develops from this center. Apart from primary infection, pneumonia, which unquestionably enters through the respiratory canal, it is probable that in no case is there an absence of glandular swelling, although in many instances the presence of the primary bubo cannot be clinically ascertained with certainty. Dr. Müller's colleagues were unable in three cases which they dissected to discover the characteristic signs of the primary bubo. The dissections proved, however, that in certain cases where the swelling was slight and painless, the examination of the patient by palpation or touch had failed to establish the presence of a bubo which, nevertheless, existed. Dr. Müller considers it probable that, in many cases, the infection may retain its local character during the whole course of the disease and never become general. The milder character of the disease in individual cases cannot with any certainty be attributed to mere localization, however, as instances of the less malignant form also occur where the infection is general. The time at which the infection becomes general cannot be recognized from the external symptoms. From these circumstances it must be concluded that the course and termination of the disease are not to be inferred from the mere fact that the infection has remained localized or become general. The positive or negative result of bacteriological examinations is alone decisive. He expresses himself strongly against the experimental puncture of the bubo, and is still more opposed to larger incisions and the cleaning out of its contents. A patient, he says, does not die because he has bacilli in his blood, and does not recover because of their absence. On the contrary, the question whether the organism will triumph over the disease depends upon the degree of its natural power of resistance to the toxins of the bacillus. There can be no doubt that general infection has occurred in patients who have recovered, and it is even probable that there have been many such cases.

SPECIAL ARTICLE.

THE PRESENT STATUS OF OPINION UPON THE USE OF QUININ IN MALARIA.

QUININ has long been recognized as a thoroughly efficient remedy for malaria. At the same time there has always existed an undercurrent of feeling that it is more or less harmful to the human organism. This feeling has persisted despite the extensive use of quinin for centuries and despite the fact that except where idiosyncrasy existed it was usually impossible to point out definitely any unfortunate effects from its adminstration. This feeling of suspicion toward the drug corresponding closely to the very similar feeling with regard to the use of mercury in syphilis, has had its periods of dominence in medical history. Notwithstanding the fact that the action of quinin is no longer the mystery that it was before Laveran's discovery of the plasmodium malariæ, we seem about to enter on such a suspicious therapeutic period at the end of the enlightened Nineteenth Century.

We now know that quinin acts by its germicidal power over the plasmodium, and need not appeal to any indefinite theoretic antiperiodic or antifebrile action to explain its prompt action on malarial paroxysms, yet there is in the air a spirit of opposition to the drug that is liable to do a good deal of harm. Of late this opposition has taken the form of warnings against the use of quinin in suitable quantities for the treatment of the estivo-autumnal type of malaria. This form of malaria which only recent study has separated from the general class of intermittent fevers is acknowledged by all observers to be especially obstinate to treatment. All the authorities on the subject, however, who draw their knowledge from clinical experience and not from an inner consciousness are agreed that quinin is the one remedy absolutely necessary for the treatment of the disease, and that to accomplish any results the drug must be pushed vigorously and fearlessly and this despite complications that may be present.

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Professor Koch started the present reaction against quinin by stating after his return last June from German East Africa that he believed that quinin was used in too large doses in the treatment of malaria, especially in the tropics (it is there that the estivo-autumnal type of malaria abounds). He considered it proved to his mind that the well-known and much-dreaded "black-water fever" of the tropics, malarial hemoglobinuria, was practically always due to the excessive administration of quinin. This declaration of Professor Koch's had an unfortunate effect it is said even in our own army during the recent war. Some of the men refused to take quinin as a prophylactic, others stricken with malaria refused to take the drug as a remedy, or at least objected to its exhibition to them in doses sufficient to secure prompt and effectual results. Even some medical men were discouraged from prescribing as much quinin as they might otherwise have employed because of Koch's declaration.

It is of interest then to note that from all those having really extensive clinical experience in the matter of malaria Koch's views have called forth decided protest. Here and there some one with but small experience of malaria, or perhaps none (in which of these two classes we shall include the writer of a recent editorial in *The Journal of the American Medical Association* we do not know), has expressed agreement with Koch's opinion in the matter. The voice of our own Southern medical men, of the English medical men in India, and of the medical men of Brazil and of Italy have been as a unit against Koch. Dr. W. H. Crosse, recently the chief medical officer to the Royal Niger Company, the great English commercial and exploring company of Central Africa, discussed Koch's statements as to quinin and its etiologic relation to "black-water fever" at the opening meeting for the present scholastic year of the Guy's Hospital Physical Society. He has had a very large experience with tropical malaria, especially with the African forms of it, and is very outspoken as to Koch's imprudent jumping at unjustifiable conclusions in the matter of quinin intoxication. He has had "black-water fever" himself, a privilege not accorded to many foreigners whom the gods destine for long life, and is assured that quinin stands in no sense in a causal relation to it. The best proof of this is that the black-water fever occurs only in certain well-defined parts of the country, though quinin in used unsparingly throughout all parts of Africa. Another convincing consideration is that even in the midst of the genuine malarial hemoglobinuria the only remedy that can be depended on is quinin.

Koch was not the first by any means to call attention to the fact that quinin sometimes causes disintegration of the red blood-corpuscles. This fact had often been noted and was known to be an idiosyncrasy to quinin to which certain people with peculiarly susceptible red blood-corpuscles are liable. Laveran treats the subject very practically after considerable experience with it in Northern Africa and suggests the use of another of the cinchona alkaloids, the sulphate of cinchonidin, in such cases, but is not able to advise a stoppage of "bark" treatment.

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The estivo-autumnal type of malaria is especially intractable. It does not yield promptly to quinin, as do the other forms of the disease, but quinin is, nevertheless, in the eyes of all the authorities, our sheet anchor in its treatment. It is the form of malaria which is most liable to be complicated by nephritis, but the occurrence of this or of simple albuminuria does not constitute a contraindication to quinin. Brun and Laveran describe a form of intermittent albuminuria which is benefited by quinin. Rem-Picci of Rome in a recent series of articles on malarial nephritis in *Policlinco* has expressed his views on this matter very forcibly and considers that the renal lesions will be inevitably progressive unless quinin is administered in large doses without delay. Our own Osler says, "In an active malarial infection (no matter what the complication) the patient runs less risk with the quinin." It is interesting to note that he has "never seen a case in which black-water fever developed as the result of the use of the drug."

The files of the Indian and Brazilian medical journals

contain a number of protests against Koch's unwarranted deprecation of quinin and the harm it is liable to do if taken seriously. The good story from the Roman Hospital that was told last week in our editorial columns seems, as was said, almost too apt and too timely to be true, but it illustrates very forcibly Italian opinion as to the use of quinin, and especially of the necessity for pushing it, in the depressed conditions that result from estivo-autumnal infection. The intravenous injections of quinin introduced by Professor Bacelli are growing, not decreasing in favor. Certain remedies act as very helpful adjuvants to quinin in certain cases of the estivo-autumnal type, though quinin itself is practically indispensable. Among the adjuvants practically all are agreed that opium is the most useful. Employed as Professor W. H. Thomson suggests (see page 777) in the form of camphorated tincture, it is undoubtedly tonic and stimulant and gives with the quinin results that that very useful drug would not give alone. Nothing can, however, replace quinin in the treatment of even estivo-autumnal malaria, so that there is every reason on good clinical authority to discourage the feeling at present existing in certain quarters, that it is not indispensable and may do harm.

SELECTED ARTICLE.

A FEW FRIENDLY BACTERIA.

The following conversation, overheard some months ago, may be of interest at the present time:

A few friendly Bacteria were drinking coffee after having dined together at the Royal Intestine Club one evening, when the Diphtheria Bacillus remarked to the Typhoid Bacillus: "Typhy, old man, you are one of the lucky devils; business goes along well with you, while we fellows see our splendid old-established houses crumbling before the modern school. Now, there is poor old Smallpox. I have heard Amebic Dysentery and his grandfather Cholera say they remember when Smallpox did nearly all the business on the Continent."

Over by the window, reading *The Anti-Serum Gazette*, sat Tubercle Bacillus. You could see that in his younger days he had been quite a fine-looking fellow. He rose and, approaching the group, said: "Well, boys, how is business?" "Pretty good," said two or three. "Elegant," said Measles, in his weak, piping, impudent voice. "I see, Diphtheria, my boy," continued Tubercle Bacillus, not noticing Measles, "England is still with you. She will not accept Antitoxin; they are weakening, though, I am afraid. Now, I have made it a rule when these investigations are too searching to get out of the way for a little while by taking up business somewhere else. Why, one day Staphylococcus, who is now in business with me (clever all-round fellow he is, too), came running into my office and said: 'Have you seen that Koch has definitely discovered you?' 'Yes, I saw that,' I replied quietly; 'but don't worry. And, boys I say to you, don't mind being seen. In my late unpleasantness with Koch over the Tuberculin affair, I was sorely put to it, but one day I called Streptococcus and said that he and Staphylococcus must transfer the bulk of my business from the lungs to the peritoneum, and that I wanted my own men at first to be put in charge of the new place of business, and that later Strepto and Staphylococcus and their men could take hold. "Well, you would be surprised how nicely business is going on there. I have been thinking seriously of giving up the lungs altogether."

"It's all right," said Typhoid, "for you and Diphtheria to talk of shifting your business. Now, I can do business in but one place, and they seem to be getting on to me there fast. It was evident that Typhoid was depressed and thought that his business looked gloomy; he, however, called the servant, Ptomain, to take the orders for drinks. Tubercle and Typhoid ordered milk punches, Typhoid adding that he wanted a dash of Woodbridge Antiseptic, which he found improved him so much. "Or, no," said he; "give me a bottle of Aerated Schuylkill Water. That always improves me."

"What are you grumbling about, Typhoid?" said Yellow Fever. "You who have no port restrictions ought to be happy enough now that war is declared." "You don't say so," said Malaria; "that makes things look up all around." Malaria was an Italian by birth; he had never been cultivated, however, and, being a foreigner, his methods of business were a little obscure, even to Typhoid, who at one time was supposed to be in partnership with him. "I have it," said Typhoid. "Let us watch the medical appointments, and if they are what we want, Yellow, and you, Malaria, and I will go to Cuba, and see what we can do." "There is not a name on the list I ever heard of, and I'll bet," continued Malaria laughingly, "not one of them has ever heard of me, much less seen me. But they all know about Quinine," he added dolefully. "Never mind," said Typhoid, "we can fool them together on the temperature charts. I will write a private letter to Johns Hopkins Hospital and ask if they have any objection to Messrs. Malaria and Typhoid doing business together for a few weeks."

The conversation herein related was overheard by Bichlorid and his brother, Calcium Chlorinatus, and the young fellow Formaldehyd, also Quinin, who were doing detective duty in the interest of the United States Government and the army. When the appointments to Cuba came only Quinin was appointed, and the rest were kept at home to do hospital duty.—DR. CAMAC, *N. Y. Times.*

CORRESPONDENCE.

A CASE OF XEROSTOMIA AND ITS CURE.

To the Editor of the MEDICAL NEWS.

DEAR SIR:—I read with much interest the article on "Dry Mouth" by Dr. Lartigau in the MEDICAL NEWS of October 29th, as I have been wrestling with a case of that kind which I think can now be called completely cured. The case is as follows: Mrs. A., married, fifty-six years of age, born of Hebrew parents in Alsace, has resided in California since the early days, where she has raised a family of healthy children. She has always been healthy and robust, and now weighs 170 pounds, al-

though she has been *sans* teeth of any description for the last fifteen years. She is quick and nervous in action and manner. In May, 1897, she consulted me with reference to an extreme dryness of her mouth, which had been troubling her then for about four months, and which kept her constantly chewing to try to relieve it. She said it came on suddenly after an examination of her mouth for the purpose of having a set of teeth fitted, but which she was disappointed in getting.

I tried several remedies without appreciable effect, but on advising her to keep smooth pebbles in her mouth several hours a day she experienced marked relief. I advised the wearing of artificial teeth, therefore, as the best method of obtaining permanent relief. In August, 1898, she had a double set of teeth made, and since wearing them she has not had the slightest symptom of the trouble that had been harassing her constantly for twenty months.

M. W. WARD, M.D.

WOODLAND, CAL., December 1, 1898.

LYCOPODIUM SPORES IN URINE.

To the Editor of the MEDICAL NEWS.

DEAR SIR:—Erroneous interpretation of foreign bodies in human secretions and excretions is a very extensive subject, and I should not add to the literature were it not for the fact that in the present instance the cause of error was a substance that might be supposed to be familiar, and the persons misled experienced microscopists. One can hardly be surprised if men without training in microscopic work mistake pitted cells for tube-casts, spiral ducts for parasites, etc., but modern biologic training should prevent such errors as the one described below.

While working at Sternberg Hospital, Chickamauga Park, last summer, a specimen of urine was brought to me from another hospital, with the following history: The urine came from a female nurse, sick with a mild fever. It contained a small amount of albumin and a fine granular sediment, and in the latter were always bodies which up to that time had not been positively identified. The gentleman who brought the specimen was a specialist in microscopy, appointed by the Government for carrying on laboratory diagnostic work. The bodies were unknown to the regular army surgeon-major, and the several volunteer surgeons in the hospital; they were seen by three experts in bacteriology, all original workers of international reputation, and one at least with training in general biology, without any near guess at their nature. The specimen then went the rounds of several pathologic laboratories with similar results. An ex-professor of pathology who claimed to make special studies in cell-degeneration, and who felt competent to teach that the malarial parasites are degenerated blood-corpuscles, asserted the bodies were degenerated bladder-cells. Many thought the bodies were animal parasites, and a government official, well-known as a microscopist, advised that the specimen be sent to a parasitologist, now in Europe, for identification. The bottle came to me because it was thought by some the bodies were the same as those I reported some years ago from the bladder of a man.

I found bodies in the urine which I at once recognized as vegetable spores of some kind, probably lycopodium, and from the number present thought them due to accidental contamination. I was assured by the physician they were the bodies in question, and were always in the urine in similar numbers as it was passed. A catheter had not been used. I could not at the time obtain lycopodium for comparison, but when I did was able to satisfy myself as to the identity of the spores. In the meantime my suggestion that the contamination depended on a dusting-powder proved to be correct, a powder containing lycopodium being used for some irritation of the labia. A description and illustration of the bodies does not seem necessary, as they can be obtained in any drug-store.

Occasional pollen grains or spores are not uncommon in specimens of urine sent from bedrooms, and their general appearances should therefore be known by those who have to examine urine. As with other contaminations, they can be excluded by taking the specimen with a catheter, or, in the case of a male patient, by seeing it passed.

GEORGE DOCK, M.D.

UNIVERSITY OF MICHIGAN,
ANN ARBOR, MICH., December 10, 1898.

OUR PHILADELPHIA LETTER.

[From Our Special Correspondent.]

ANNUAL REPORT OF THE STATE BOARD OF HEALTH—NEW BUILDINGS OF THE UNIVERSITY OF PENNSYLVANIA—HOSPITAL BEQUEST—ANNUAL DINNER OF THE RESIDENT AND EX-RESIDENT PHYSICIANS OF THE PHILADELPHIA HOSPITAL—JEFFERSON MATERNITY DOLL-SALE—PERSONAL NOTES—INSTRUCTION IN CONTAGIOUS DISEASES—HEALTH-BOARD STATISTICS.

PHILADELPHIA, December 13, 1898.

THE fourteenth annual report of the State Board of Health has just been made public and contains not a few points of interest. After relating the results of the water-supply investigation and detailing suggestions for the improvement of the supply, as related in the MEDICAL NEWS a few weeks ago, the report takes up the matter of infectious diseases which were prevalent in the State during the last year. Five outbreaks of smallpox have occurred during the year, with but two deaths in a total of twenty-four cases. Two of the cases occurred in Philadelphia and, the authorities believe, may have been brought from the South by means of cotton, as the cases occurred among cotton-mill operators. Anthrax occurred in four counties of the State, and seems to be less rare than it is generally believed to be. There have been thirty-one outbreaks of diphtheria this year as against sixty-one during 1897, in connection with which the assistance of the Board was asked. Scarlet fever appeared at nineteen different points and there were twenty-nine outbreaks of typhoid fever as compared with seventeen last year. The local epidemic of typhoid fever confined to a certain section of the city seems to have been due to a defective sewer, which poured its contents into Wissahickon Creek, just above the intake of Queen Lane reservoir, which supplies the infected portion of the

city. A soldier from Porto Rico had what was probably yellow fever, the only case occurring in the State. There are several cases of leprosy in the State and one supposed case in Philadelphia.

The report concludes by calling attention, among other things, to the illegal practice of medicine, registration of graduates and licentiates in medicine, and to legal opinions and decisions.

The new laboratories of pharmacy, physiology, and pathology of the University of Pennsylvania will be begun in the spring and a committee of twelve, with Dr. J. M. Baldy as chairman, has been appointed to aid in raising the necessary money, some $300,000. An appeal is to be made to the alumni of the Medical Department and it is thought there will be no difficulty in securing the money from them as of 11,000 graduates there are probably 6000 now living.

A unique bequest, which is on exhibition here, has been made to the Delaware Hospital at Wilmington, in the shape of a handsome set of silver presented by employees of the Pennsylvania Railroad to Henry H. Carter, a division superintendent, and bequeathed by his widow to the hospital to be sold, the proceeds being used to maintain a free bed for railroad employees.

The Association of ex-Resident and Resident Physicians of the Philadelphia Hospital held its twelfth annual dinner last Tuesday, December 6th, at the University Club. Dr. J. Chalmers Da Costa, Chairman of the Committee of Arrangements, acted as toastmaster and toasts were responded to by Drs. William Osler of Johns Hopkins, Theodore Diller, J. William White, Horatio C. Wood, Alfred Stengel, Charles S. Potts, Joseph T. Buxton, and Richard C. Norris. A letter was read from Dr. Alfred Stillé, the President, who was unable to be present. About seventy members were present at the dinner.

A sale of dolls was held at the Stratford Hotel on Friday and Saturday last for the benefit of the Jefferson Maternity. A feature was "the old woman who lived in shoe," the shoe in question having been used for the same purpose at the Sanitary Fair held in Logan Square during the war (1864).

Dr. George M. Stiles of Conshohocken has been appointed by Governor Hastings a trustee of the State Hospital for the Insane at Norristown.

Dr. A. Graham Reed, aged sixty-one years, died of pneumonia last week. He was a graduate of the University of Pennsylvania and served as surgeon during the Civil War.

Dr. Thomas Leidy Rhoads, who recently received appointment as Assistant-Surgeon in the United States Navy, has resigned.

The local Board of Health has had quite a wrangle over the question as to whether advanced medical students should or should not be admitted to the wards of the Municipal Hospital for the purpose of studying contagious diseases. The Women's Medical College and the University of Pennsylvania recently asked for the privilege of sending students to the hospital for such purpose, and in view of these requests the following resolution was introduced:

Resolved, that the physician in charge of the Municipal Hospital be authorized to give instruction to ward classes in said Hospital, under such regulations as he may formulate, and which shall be approved by the Director of Public Safety and the Sanitary Committee of the Board of Health, provided that such instruction may be discontinued at any time by order of the Director of Public Safety or the Board of Health.

President A. A. Hirst was most bitter in his opposition to the resolution and declared that the notorious carelessness of medical students would spread contagion through the city. Dr. Walk and Dr. Lee favored the resolution for, as the latter justly said, how can a medical graduate be expected to recognize smallpox, for instance, when he has never had the opportunity of seeing a case? Action was deferred, but it seems probable that the resolution will be passed, especially as Dr. Welch, resident physician of the Hospital, has expressed his willingness to aid by giving ward instruction.

The total number of deaths occurring in Philadelphia during the week ending December 10th, as reported at the health office, was 436, of which 114 occurred in children under five years of age. The total number of new cases of contagious diseases was 228, reported as follows: Diphtheria, 94 cases with 17 deaths; scarlet fever, 22 cases with no deaths; typhoid fever, 112 cases with 7 deaths.

MEDICAL MATTERS IN CHICAGO.

MUSICAL HEART MURMURS—DIETETIC MANAGEMENT OF DIABETES—CASE OF DR. GUIDONE—THE ILLINOIS DRAINAGE CANAL FROM A SANITARY STANDPOINT—VITAL STATISTICS—SYMPOSIUM ON GONORRHEA.

CHICAGO, DECEMBER 12, 1898.

AT a meeting of the Chicago Society for Internal Medicine, held November 22nd, Dr. Henry F. Lewis read a paper on "Musical Heart Murmurs." He reported a case of mitral stenosis characterized by a musical murmur heard about the apex and at the end of the diastole. Musical murmurs heard over some parts of the heart's area, in various abnormal cardiac conditions, are not uncommon phenomena. According to Eichhorst, a musical bruit may be caused by a congenital aberrant cord running from the ventricle to the aortic wall. Huchard maintains that aortic regurgitation due to arteriosclerosis is more commonly accompanied by musical, rough or whistling murmurs than is that lesion due to other causes. While musical sounds are oftenest heard in the aortic region and are due to a lesion of the corresponding valve, yet sometimes mitral disease may be the causative factor. In the second case the musical murmur was heard with diastole over the right carotid as far up as the angle of the jaw, and for a short distance along the course of the right subclavian.

DR. CHARLES W. PURDY read a paper on "The Principles of the Dietetic Management of Diabetes Mellitus." He dwelt upon the general features of the disease and its amenability to treatment in the aged and in the young. He then spoke of the caloric value of the most suitable

foods in diabetes, the use of meat and the failure of the absolute meat diet. He pointed out the use of fat and its high potential value as a nutrient and force generator. The range of use of the carbohydrates was dwelt upon at length. Diabetes after middle life is one of the most manageable diseases with which the physician has to do, if he only has entire control of the patient. Reference is made especially to primary cases of the disease in people over fifty years of age, who have not already been neglected to the extent that the disease has made serious inroads upon the strength and upon the body weight of the patient. The diet of diabetic patients should be so ordered as to maintain, and, if possible, increase the body weight and strength of the patient, as these are the first to be undermined by the disease. In order to compass these primary objects a systematic series of frequently recorded observations must be made of the quantity and quality of the food actually ingested; of the quantity and quality of the waste excreted, especially by the kidneys, and of the actual body weight. By these means only it is possible to detect those disturbances of the metabolism caused by the disease and to refer directly to their cause. There exist among diabetic patients the greatest differences in individual capacity for utilizing the carbohydrates. Some can take and utilize comparatively large amounts; others very much smaller amounts; while a few cannot take carbohydrates in the smallest quantity without their immediate escape by the urine in the form of sugar. Not only this, but also very wide oscillations of the tolerance for carbohydrates occur in the same patients at different, and sometimes, very briefly separated periods.

Recently a Dr. R. F. Guidone was charged with practising medicine in Illinois without a license and was acquitted. The State Board of Health will appeal the case and this gentleman will be prosecuted if he attempts to practise further. The Illinois State Board of Health recognizes no foreign diplomas as a basis upon which to issue a certificate to practise medicine and surgery in Illinois. More than 50 per cent. of the degrees purporting to be issued by foreign universities which have been presented to the Board during the last two years have been found to be fraudulent.

With a view to protecting the taxpayers of Illinois against unwarranted claims for damages growing out of the operation of the drainage canal, Commissioner of Health Reynolds has addressed an important communication to the drainage board. Believing that the waters of the Illinois and Mississippi will not be polluted by the flow of the canal, he urges the necessity of preparing evidence at once, showing the present sanitary condition of the streams. A systematic and thorough official test is advised for the purpose of forestalling claims which are certain to arise after the canal has been opened.

The subject is one to which Commissioner Reynolds has given his personal attention for years. From tests of the water, made at various points along the route of the future flow of the drainage canal, he is satisfied that the water purifies itself by reason of natural conditions, and he is convinced that St. Louis, Peoria and the various towns touched by the line of the sanitary outlet for Chicago will not suffer by reason of a pollution of the water. To establish this fact he calls attention to the importance of official records showing the quality of the water at all of these points before and after the sewage of Chicago has been turned into the channel. Without this evidence, assuming Dr. Reynolds is correct in his theory, the sanitary district is threatened with an inestimable financial drain by reason of damage suits based upon the pollution of the water between Chicago and the Mississippi. Such examinations have been made from time to time since 1869—the most important, in point of number, being those instituted by the late Dr. John H. Rauch in 1866-89, made by Professor J. H. Long and collated by Dr. F. W. Reilly. While these examinations demonstrated the effective decomposition of sewage matters, and consequent purification of the stream in a flow of less than fifty miles—that is, between Bridgeport and Channahon—they are defective scientifically, in that they were confined solely to the chemic determinations, and in the present developed state of water analysis and examination, when water bacteriology is deemed essential, they would probably have little weight. This defect was, in part, remedied by the work done as late as September, 1894, by Dr. Adolph Gehrmann of the city department laboratory, who made a special bacteriologic study of certain organisms in the water between the south branch of the Chicago River and a point a few miles below Peoria. But this work was confined to the bacterial examinations and was not supplemented by simultaneous chemic analysis. Both are essential. If the suggestion be acted upon Dr. Reynolds will take general charge and arrange the details of the collection of samples, the points whence these shall be obtained, the technic to be employed in the examinations, the data to be included —meteorologic, topographic, demographic, etc.

From a sanitary point of view the people will watch with great interest the progress made in the construction of the drainage canal from the inception of the plan. It is an open question now whether the sewage of Chicago for all time can be disposed of by dilution as contemplated in the canal plan. If it cannot, eventually evaporation must be substituted, or at least, added. The existence of the drainage system will make that plan easier in any event, and the money spent in the canal will not have been wasted. But that has nothing to do with the question at hand. The operation of the drainage canal will be successful from a sanitary standpoint, both for the sanitary district of Chicago and for the country below. There is no doubt that the diluted flow in the canal will purify itself through the action of the air and by precipitation. An analysis of samples of water taken from the Illinois, Mississippi and other streams into which sewage empties confirms this belief.

There was an increase of 38 in the number of deaths from all causes during the week ending November 25th over the total of the previous week and an increase of 83 over the total of the corresponding week last year. This increase is chiefly in deaths from cancer, diphtheria, and nervous diseases. The number of deaths from cancer, 25, is the

highest ever recorded in any one week in Chicago. In his second annual report, that for 1894, Health Commissioner Reynolds showed that the mortality from this disease had increased 812 per cent. in the forty-four years between the ten-year periods, 1851–60 and 1885–94, and then pointed out that this enormous increase, the incurability of the disease in almost all its forms, and the increasing evidence of its infectious character strongly indicated the need of preventive measures, such as disinfection of dressings, clothing, etc., of cancerous patients during life and of premises after death to as full an extent as in the case of consumptive patients. Four hundred and sixty births were reported, 244 being of boys and 216 of girls.

At a meeting of the Chicago Medical Society, held November 30th, a symposium of papers was presented on "Gonorrhea." DR. F. KREISSL spoke of gonorrhea in the adult male, and pointed out as the cause of failure in dealing with the disease superficial diagnosis, incorrect conception of the gonorrheal process, improper selection of the remedies, and the almost universal tendency to start in with an effective treatment too late and to discontinue it too soon, and last, but not least, the lack of individualizing cases. Silver salts still rank very high in the treatment of this malady, and their value in destroying the vitality of the gonococcus is being more and more appreciated. DR. T. J. WATKINS dwelt upon gonorrhea in the female adult. DR. I. A. ABT discussed the subject of gonorrhea in children, saying that gonorrheal infection of children manifests itself primarily as a vulvovaginitis, a urethritis in the male child, a purulent ophthalmia, stomatitis, or rhinitis of the newborn. The disease occurs in children from one to twelve years old, although it is most frequent in children under six years of age. The vulva and urethra are most often attacked primarily; the vagina, if involved, becomes so secondarily. The gonorrheal virus may be conveyed through sponges, towels, bed linen, by manipulation of the parts with unclean fingers, fever thermometers, or the contagion may in rare cases be conveyed by criminal assaults on little girls. The prognosis in little girls is more favorable than in adults. He reported two cases as having come under his observation; one in a boy, aged two years and three months; the other in a patient nine years of age. DR. D. N. EISENDRATH read a paper on the pathology of gonorrhea and treatment of some surgical complications. DR. BERTRAM W. SIPPY dwelt upon gonorrhea from the standpoint of internal medicine. As etiologic factors he considered (1) the presence of the gonococcus; (2) the action of gonotoxins produced either at the site of the inflammation, or possibly conveyed by the blood to the part from the seat of primary infection; (3) secondary infection with various micro-organisms; (4) mixed infection. Arthritis occurs as a metastatic complication of gonorrhea in from 2½ to 3 per cent. of all cases. Endocarditis complicates gonorrheal processes much more rarely than arthritis. The left heart is more frequently affected. Diseases of the brain, spinal cord, meninges, cranial and peripheral nerves have been reported on good authority, in which gonorrhea was regarded as the etiologic factor. Functional disease of the nervous system is much more common in gonorrheal cases. There is nothing specific in the symptomatology of nervous disease complicating gonorrhea. A relatively large number of patients with myelomeningitis have recovered. Bacteriologic research has been attempted a few times, but thus far the gonococcus has not been found.

OUR LONDON LETTER.

[From Our Special Correspondent.]

A RARE CASE OF SARCOMA OF THE HEART AND KIDNEY—EMBOLISM OF THE COMMON ILIAC ARTERY AND VEIN, SPLEEN AND KIDNEYS IN TYPHOID FEVER—INCREASE OF TABES MESENTERICA IN CHILDREN DUE TO MILK—A STENOGRAPHIC MEDICAL JOURNAL—OLD MORTALITY REPORTS.

LONDON, December 5, 1898.

AT a recent meeting of the Pathological Society a large number of specimens was presented and reported upon, but only a few were of unusual interest. Among them was a sarcoma of the heart, presented by DR. H. LISTER. The patient was a young girl who was brought into the hospital complaining of pain and swelling in the abdomen. A tumor in the right lumbar region was promptly discovered and also a well-marked heart bruit and general pulmonary dulness. The latter rapidly progressed to congestion and the patient died in about two-weeks' time. At autopsy a rounded fleshy growth about the size of a hickory-nut was found projecting into the cavity of the right auricle and the right kidney was changed into a pulpy, dark-red mass, as large as a child's head. Both tumors upon microscopic examination were clearly sarcoma of the small, round-cell type, sections being exhibited. The interesting features of the case were its great rarity, only some fifteen cases of primary sarcoma of the heart being on record, and the extremely rapid growth of the tumors which produced death within a month from the time of the first appearance of any noticeable symptoms.

DR. WILLIAM HUNTER showed specimens of complete embolic obstruction of the common iliac artery and of the corresponding vein upon the right side after typhoid fever. The leg became completely gangrenous up to the upper third of the thigh, but as an interesting confirmation of the belief that the septic processes of even gangrene are caused by infection from without, on being thoroughly asepticized and wrapped in salicylated wool and sublimate gauze it dried up and mummified without giving rise to any septicemic symptoms whatever. The patient, a boy aged fifteen years, lived three weeks and then succumbed to further embolization of the spleen and kidneys, and finally thrombosis of the apex of the left ventricle, all of which viscera were exhibited. Truly, the limit to the possible sequelæ of typhoid does not seem to have been reached yet. Several similar cases were reported by Drs. Boyd and Hawkins.

A specimen of primary carcinoma of the gall-bladder without a calculus was shown by PROFESSOR ROSE BRADFORD, and a similar condition with a large calculus firmly embedded in the grasp of the growth by Dr. William

Hunter which brought forth a discussion of the mooted question of the causal relations between calculus and cancer. The balance of opinion inclined to the coincidence view.

DR. HADLEY presented a specimen of that rare condition, primary carcinoma of the pleura with secondary deposits in the kidney, liver, and heart.

At Mr. Jonathan Hutchinson's weekly demonstration at his clinical museum last week two rare cases were shown, one of rapidly growing neuroma upon the lower trunks of the brachial plexus in a woman aged seventy years. The tumor had been noticed only one year, was of the size of a walnut, and caused both night-pain and sharp tingling sensations in the forearm and fingers, especially on the radial side. There were two smaller tumors just below it upon the nerve-trunks. On account of its rapid growth and tendency to become multiple Mr. Hutchinson advised its removal.

The other case was a flat, painful, contracting induration of the skin of the axilla in a man aged eighty-six, which strongly suggested to the lecturer scirrhus of the axillary sebaceous glands. This, though rare, we have little reason to be surprised at on embryologic grounds, as the highly susceptible mamma is but a specialized cluster of these large sebaceous glands. The patient's back and chest were also covered with the yellow plaques of tinea versicolor, and Mr. Hutchinson called attention to the fact that there is a regular succession of tineæ corresponding to the different ages of life. In childhood tinea capitis or tonsurans flourishes, but dies out about puberty or early adult life, tinea barbi attacks the beard, scalp and eyebrows, but loses its power of lodgment by middle life. In middle life man is susceptible only to tinea versicolor, and in old age, as a rule, he becomes immune even to this, the present case being a rare exception.

In the second Harveian Lecture on "Tuberculosis" week before last SIR RICHARD THORNE THORNE took up the question of dissemination through milk. He adduced the interesting fact that although the deaths from pulmonary tuberculosis in adults have decreased nearly thirty per cent. during the last twenty years, yet the deaths from intestinal tuberculosis (tabes mesenterica) in children under one year have increased nearly twenty per cent., so that they account for nearly twenty per cent. of all deaths under this age, a change which he could not help associating with the immense and otherwise infinitely beneficial increase in the use of milk as the main food for children. Bacteriologic examination of numerous samples of milk taken from the stalls in several English towns had revealed tubercle bacilli in from four to eight per cent. of them. He urged vigorous and frequent veterinary inspection of all dairy cattle but thought the tuberculin-test impracticable on account of the enormous expense of killing every animal that reacted, and also because it would disqualify nearly one-third of the cows at present in our dairies and thus cause a serious shortage in the milk-supply. The last consideration strikes us as being rather a singular reason. His own remedy is the condemnation of every animal showing signs of advanced tuberculosis of any organ or of disease of the udder.

A unique curio of medical literature is the little London *Photographic Record of Clinical Teaching and Medical Science*, edited by the Society of Medical Stenographers, of which Sir William Gowers is the leading light. Into a thin, small pamphlet of fifteen pages about six inches by four, are compressed four to six original articles and case reports, several editorials, and a column or two of news items. It is printed in pure Pitman shorthand, and for compactness the contrast between it and the average medical journal is like that between a pound of sugar and a gram of saccharin. Its neatness, lightness, and economy of print and space make us long for the day when nothing but shorthand as a means of literary expression will be taught in our schools and all our literature can be reduced to this compact and beautiful form.

A correspondent of *Guy's Hospital Journal* has unearthed an ancient copy of the Bills of Mortality for London of a week in October, 1714. Some of the causes assigned are delicious and in their frank agnosticism contrast most favorably with our modern "heart-failures," "asphyxias," and "malnutritions." Thus, "griping in the guts" is credited with eight deaths, "stoppage in the stomach" with ten, and the climax is reached by three which were caused by "suddenly." A startling commentary upon certain recent legislation are the deaths from smallpox, which were 73 in one week, or fifteen per cent of the whole list. A fascinating but mysterious finding is "rising of the lights," a disease now almost extinct, unless it may be in some remote rural districts of the Middle West of the United States, where we have heard a patient described as "coughin' fit to raise her lites an' liver."

TRANSACTIONS OF FOREIGN SOCIETIES.

French.

TOXICITY OF APPENDICITIS—SUCCESSFUL RESECTION OF THE STOMACH—HOW FAR IS THE SPHINCTER ANI INDEPENDENT OF ITS NERVES?—DIFFICULTIES OF JEJUNOSTOMY—TO REMOVE FOREIGN BODIES FROM THE NOSE—SALINE SOLUTIONS IN INFECTIONS—NAUSEA AS A PREMONITORY SYMPTOM OF NEPHRITIS—BALDNESS CAUSED BY A NEW DRUG—STERILIZED MILK AND GASTRO-ENTERITIS—TWELFTH CONGRESS OF SURGERY.

AT the Academy of Medicine, November 8th, DIEULAFOY spoke of appendicitis as an affection not only infectious but toxic as well. Urobilinuria and albuminuria are by no means uncommon symptoms, and in grave cases there may be cerebral and bulbar symptoms of a typhoidal character. The icterus and the cerebral symptoms develop in general sooner than similar symptoms of an infectious origin, appearing in the earlier days of the disease, and often in the case of jaundice, before there is fever.

At the Session of November 15th, LE DENTU substantiated the claim for a toxicity of appendicitis. A little girl upon whom he had operated for suppurative appendicitis, developed two days later hydrencephalic cries, and died forty-eight hours later in collapse. The reason assigned was that of secondary metastatic meningitis. He had seen

icterus only in cases of chronic appendicitis. One patient who had suffered for months with gastro-intestinal symptoms and icterus was relieved of all his symptoms including the icterus by the removal of his appendix.

PERIER presented a woman from whom a year previously he had removed the central portion of the stomach and the corresponding part of the transverse mesocolon for carcinoma. The parts of the stomach were united by a double row of sutures, and covered with omentum. Recovery was perfect, the patient had gained twenty-five pounds in weight, and there was as yet no sign of recurrence. The result was most encouraging. The speaker called attention to the importance of an empty intestine in operations of this character. This is easy to obtain as far as the small intestine is concerned, but the large intestine will often be found distended with fecal matter, especially if the patient has been upon a milk diet. If such a condition is found at laparotomy a fatal issue may sometimes be avoided by crowding the fecal matter through the colon into the sigmoid flexure.

At the Academy of Sciences, November 7th, ARLOING and CHANTRE told of the results of experiments upon the sphincter ani of dogs. After the complete division of the nerves which supply the sphincter ani, the elasticity of this muscle will prevent incontinence of feces and urine, and its physiologic and anatomic properties are preserved at least a year after bilateral nerve section, while unilateral division of the nerves has no apparent effect upon the sphincter, either upon its structure or function.

At the Society of Surgery, November 9th, TERRIER described a jejunostomy for cancer of the stomach so extensive that gastro-enterostomy was impossible. A loop of intestine was fixed in the abdominal wall, and opened fifteen days later. Owing to the small caliber of the intestine and the force of peristaltic effort, it was difficult to introduce nourishment, and still more difficult to prevent its being ejected.

LE DENTU performed jejunostomy under similar gastric conditions but the patient speedily died.

PEYROT performed the operation twice. One patient died almost immediately. The other lived fifteen days only, but during this time he was fed without difficulty through the intestinal fistula.

GUINARD had experience with a fistula of the small intestine due to strangulated hernia. He found it impossible to introduce nourishment, except in the smallest quantities.

At the meeting of November 16th, FELIZET told of the success which he had in the removal of foreign bodies from a child's nose, by the simple maneuver of forcing air with a powder blower into the free nostril. This expedient succeeded in 26 out of 31 cases, in forcing the foreign body out of the nostril in which it had become lodged. In the other instances forceps were used.

At the Therapeutic Society, November 9th, BOLOGNESI read a paper upon "Saline Solutions in the Treatment of Infections," in which he admitted the value of intravenous saline injections but gave it as his opinion that this form of administration should be confined to grave obstetrical and surgical cases. The washing of the blood, which it was claimed would result from their use, and which would free the body of poisons in infections, is not thus accomplished. In infections or intoxications, saline solutions should be administered either subcutaneously in moderate doses, 100, 150, or even 500 c.cm., (3 to 16 oz.), the effect upon the heart being carefully noted, or the solutions should be administered by the rectum. Such treatment is beneficial in conditions of hypotension and collapse.

DALCHE agreed that saline injections have no antitoxic value. He had seen good results follow their use in poisoning from coal-gas. Recently he had injected subcutaneously 800 c.cm. (26 oz.) for suffocation by carbon monoxid. The condition of the patient rapidly improved.

MATHIEU has noted that a persistent nausea may be the forerunner of insidious nephritis, appearing with or without headache some time before albumin can be found in the urine. These gastric symptoms mislead the physician into supposing that he has to do with a disorder of the stomach, while in reality they are the signs of commencing uremia. He had observed this in five or six patients. In order to suppress the alimentary intoxication, and to assure intestinal antisepsis, the patient should be put upon a milk diet, and the bowels should be kept open with scammony or laxative waters, or large intestinal injections may be administered. If the stomach is intolerant of food the patient should be kept upon a fluid diet, or even deprived of all nourishment for a time. By these means it is usually possible to obtain an improvement lasting for a considerable period.

JEANSELMA warned the Society for Dermatology and Syphilography, November 10th, against the use of the acetate of thallium, a remedy recently introduced into therapeutics. This drug may cause a rapid and complete falling out of the hair. A woman took in three days about four grains of this remedy. Two weeks later almost all of her hairs had dropped out, the few remaining yielding to the least traction. One month later there was a scanty growth of some of the broken hairs, but in three months baldness was still so nearly complete that there was little hope that the hair would again grow. This instance may serve as a warning against the careless use of new remedies.

At the Medical Society of the Hospitals, November 18th, LESAGE described some facts which he had established in connection with an epidemic of gastro-enteritis which had raged in Paris, in August and September last. In the first place infants fed upon sterilized milk were attacked just as frequently as those fed upon raw milk. Furthermore, there was no difference in the course of the disease, or in its symptoms in the two classes of infants. All the injections made subcutaneously into guinea-pigs were without result when the filtered intestinal contents were employed, thus showing that there was no toxin in the intestine. If the epithelial lining of the intestine was macerated and the fluid from it injected, it was in a certain number of cases found to be highly toxic. The bacteria found in the intestine aside from the colon bacillus, were inconstant and varied in different seasons, and also

in different individuals in the same epidemic. It is hard to say just what the exciting cause of such an epidemic really is. The speaker thought that a reason might be found in the prolonged and excessive heat of the latter part of the summer. Such a heated term might increase the virulence of the bacteria normally found in the intestine, especially the bacillus coli, until it was capable of setting up a gastro-enteritis.

The Twelfth Congress of Surgery was held in Paris, October 17th to 22d.[1] FORGUE described an "Intramediastinal Esophagotomy for a Foreign Body in the Thoracic Portion of the Esophagus." A child eight years old had swallowed a large coin. Numerous attempts to dislodge it were made by several different physicians. The radiographs showed it to be situated at the level of the fourth intercostal space, plainly to the right of the vertebral column. It was, therefore, decided to operate upon the right side, in spite of the difficulties of that route. A vertical incision, 14 cm. (5.5 in.) in length, was made between the right scapula and the spinal column. The angles of the ribs were exposed. Sections were removed from the fourth, fifth, and sixth ribs, 5 cm. (2 in.) in length. Through the window thus made the fingers could be introduced, and the separation of the parietal pleura accomplished. When the fingers reached the lateral flank of the vertebræ, the coin was easily felt. The pleura was stripped from the vertebral column without difficulty, but when attempts were made to separate the pleura and esophagus, they failed because the esophagus was lifted with the pleura, away from the vertebræ. The coin could no longer be felt, and as the condition of the child did not admit of longer operative interference, the wound was tamponed. Twelve days later it was decided to make another effort to get at the coin, but before doing so a Graefe basket was passed into the esophagus, and this extracted the coin without difficulty.

In considering the relative advantages of right or left thoracotomy in accidents of this character, it is necessary to remember that foreign bodies in this part of the esophagus almost always lodge opposite the fifth, sixth, or seventh dorsal vertebra. The esophagus will have to be uncovered by touch and not by sight, and at a depth of three or four inches. On the right side the pleura begins at the sixth vertebra to invaginate itself between the esophagus and the spine and this invagination grows deeper till the esophagus passes into the stomach at the tenth vertebra. On the left side there is no such invagination, as the aorta intervenes, and in spite of the fact that this vessel has to be passed over the operation upon the left side is thought by Forgue to be more easily carried out. This is also the opinion of some of the anatomists who have studied the subject, while others have held the opposite view.

REDARD considered that radiographs are of the greatest assistance in the treatment of Pott's disease as they show the extent of the lesions, the presence of cold abscesses, and the exact position of the bones. They also show the progress which is made toward recovery under the treatment adopted. In short they give in the living most of the information which one is able to obtain after death by anatomopathologic investigations. In the treatment of scolioses radiography is equally valuable.

FROEHLICH, who had opportunity to study twenty-six cases of Pott's disease in nursing children, found that the lesions were situated in the first and second lumbar vertebræ in twenty-two of the twenty-six infants. In only four, was there an abscess. The prognosis is better than in older children, only four of these having died. Persistence of the symptoms is also an exception. The disease had a duration of between one and two years. In its early stages the trouble is not easy to recognize. When paraplegia arises, it may lead one to think of infantile paralysis, but in Pott's disease there is never a reaction of degeneration, and the paralysis, which is incomplete, is confined to the lower extremities. There is rigidity of the spinal column. In rachitis, inability to move the limbs is due to the pain in the bones on pressure, and this will serve to distinguish it from Pott's disease. If Pott's disease begins with a boss, it may be very hard to tell it from a kyphosis occurring in rickets, though in the latter the kyphosis is usually dorsolumbar, and there will be signs of rickets elsewhere in the body. For infants under one year, the best treatment consists in fixing them upon a board in an attitude of marked lordosis. For those over one year a plaster jacket may be applied in such a manner as to permit of its removal. Of these 26 patients, 4 died, 10 were still under treatment at the time of report, and 12 were cured.

ROUX reported upon the past two years in gastro-intestinal surgery. He spoke of the hopeful sign that patients, whether from a physician or not, come much earlier than formerly to the surgeon. In consequence there are fewer hopeless cases, and instead of having to reject 36 per cent. of applicants as beyond the help of surgery, he had only 4 such patients in the two years referred to. Pylorectomy for cancer was performed 12 times with 3 deaths (25 per cent.). Gastro-enterostomy by the Y-method was performed 31 times with 3 deaths (10 per cent.). Posterior Y-shaped gastro-enterostomy with three planes of suture is not a dangerous operation. In 24 non-malignant cases, it was performed without a death.

GALLET performs gastro-enterostomy in the following rapid manner: A loop of the jejunum is selected and stitched to the stomach along one edge. It is then opened and the halves of a Murphy button are passed on clamps into the ascending and descending portions of the loop of jejunum, and pressed together through its walls. This procedure takes scarcely two minutes, and avoids the stoppage of bile in the ascending part of the loop. The gastro-enterostomy is then completed, and afterward the ascending part of the loop of jejunum is divided between ligatures and each cut end invaginated and sutured. The whole procedure should not occupy more than thirty minutes.

JORDAN said that Murphy's buttons are employed in Czerny's clinic as frequently as possible, as they reduce the time of operation by about one-half. It is considered dangerous to use the button in connection with the

[1] The first part of the proceedings was reported in the MEDICAL NEWS for December 3d, p. 736.

large intestine. Gastro-enterostomy had been practised 83 times, the posterior method being employed in all but 5 of these cases. The mortality was 12.5 per cent.

TUFFIER'S mortality after pylorectomy was thirty-three per cent. For gastro-enterostomy he preferred the posterior method whenever it was possible to bring out the stomach.

MONPROFIT performed gastro-enterostomy nineteen times, and had only two deaths (ten-per-cent. mortality) as a result of operation. He favored the posterior method of Von Hacker.

REVERDIN read a paper upon "The Surgical Treatment of Goiter." In cases with moderate interference with breathing anesthetics may be used as in other operations, but in retrosternal cases and in all cases in which the breathing is much hampered, general anesthesia should be avoided and the operation done by means of Schleich's cocain anesthesia, and with as little of that as possible. Statistics were given of 6103 operations for goiter, with a total mortality of 2.88 per cent. If only uncomplicated cases are considered, the mortality is almost nil. Extra-glandular enucleation has a mortality of 0.78 per cent.; partial extirpation, one of 3.5 per cent., and resection according to Mikulicz, 6.7 per cent. Total removal of the gland has a mortality of 18.9 per cent. and ought never to be performed. In after-effects enucleation is far superior to any other operation, as may be naturally supposed since it does not sacrifice healthy gland-tissue. It is the operation of choice and should be performed whenever possible.

SOCIN never uses ether in operations upon the trachea and larynx. When operating upon goiter he uses cocain when possible; otherwise chloroform. He attributes the deaths after the operation to the use of chloroform in many instances. In his last 200 operations he had only one death, from hypostatic pneumonia. One hundred and seventeen of these operations were enucleations.

ROUX had operated 526 times, using cocain whenever possible, as the operation is less bloody, more easily performed, and less dangerous from the fact that the patient shows at once when the trachea is drawn upon or injured, and thus more than once tracheotomy has been avoided. It is interesting to note, however, that pulmonary congestion was just as common after operations done with cocain as when a general anesthetic was used. Of the 235 patients operated upon since a previous report, only three died, giving a mortality of 1.27 per cent.

GIRARD reported 545 operations and only six deaths, a mortality of 1.1 per cent.

SCHWARTZ has operated upon more than one hundred patients for enlarged crural veins, either uncomplicated or in the presence of ulcers, phlebitis, etc. Only one patient was lost, and she apparently died of heart trouble. No pulmonary embolism could be found. It has been demonstrated that varicose ulcers readily heal after the ligation of the saphenous vein. Schwartz carries the operation further, and advocates the removal of phlebitic varicosities, first tying the veins above, to prevent embolism.

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Regular Meeting, Held November 28, 1898.

THE new President, DR. S. O. VAN DER POEL, delivered his inaugural address, taking for his subject

MEDICAL ASPECTS OF LIFE INSURANCE.

He said, in part:

Life insurance is a matter of interest to a great many members of the medical profession and hence requires no apology in forming the subject of an address before a general medical society. While not originally an American institution, it has in this last decade or two made wonderful extension among us. American enterprise took the insurance system that the English had made and kept up for a few select lives and made of it a thing for the millions. With this extension large numbers of the medical profession were necessarily drawn into closer relations with it.

The insurance examiner, however, approaches a case from a very different point of view from that of the practitioner. It is prognosis, not diagnosis, that he wishes to get the material for. It is a mistake, that the novice in the insurance line often makes, to approach a case with the habit of mind that refers everything to diagnosis. Prognosis is a much more difficult problem; its more exact study in recent years has allowed of the acceptance by insurance companies in England of risks on damaged or "substandard" lives. Muirhead of Edinburg has especially distinguished himself in showing the scientific bases on which the expectancy of life in these cases can be reckoned, in order to assure the company against loss when a series of risks are taken. People suffering from valvular heart lesions, from gout, asthma and the like, can under certain restrictions and a correspondingly increased premium now take out English policies. Such risks have been absolutely refused so far in America, except for short terms on the endowment plan. Recently, however, Dr. Oscar H. Rogers of New York, after a most careful collection of statistical material in the matter (as yet unpublished), has demonstrated that the benefits of life insurance may be extended to these substandard lives without loss to the companies. Insurance companies have been too much blamed in the past for refusing to assume risks on applicants who were not up to the standard, but their position is an extremely difficult one. While it may seem that at thirty a man with cyclical albuminuria is in as good health, apparently, as another without it, who can give any assurance that it will be so twenty years later? The increased amount of observation required for the settlement of difficult problems of prognosis on practical scientific bases will undoubtedly redound to the good of general medicine. Just as the adoption of life insurance by Americans has led to its present wonderful development, so the adoption of this new feature will undoubtedly result in extension of life insurance along new lines.

DR. W. H. THOMSON then read a paper on

CUBAN MALARIAL FEVER,

which will be found on page 777 of this issue of the MEDICAL NEWS.

DR. ROBERT L. WATKINS followed with a short paper, fully illustrated by stereopticon views, on

THE CUBAN FEVER PLASMODIUM,

an abstract of which appears on page 781.

In the discussion which followed these papers DR. WICKES WASHBURN asked leave to state the condition just after being landed from the transports of some of the patients who had later been under treatment by Dr. Thomson.

A number of them were under his care at Montauk Point. A sample of the conditions in which they were received at the camp would be about as follows: One afternoon it was announced by a mounted officer who had ridden up in hot haste, that a number of sick soldiers were on their way to the hospital. Before any arrangements could be made for their reception they arrived. About seventy-five in number, they had been packed into stages, and for lack of room had been persuaded into making an effort to sit up. The day was terribly hot and sultry, the roads dusty and uncomfortable, the ride long, at least for sick men. One by one weakness had overcome them and they had sunk helpless upon the bottom of the stages. No one was able to help his neighbor because of his own weakness. Not a dozen men out of seventy-five had not sunk into collapse. Despite their weakened condition and the severity of their infection, however, all of them except one eventually recovered. This incident gives a good illustration of the terribly unfavorable conditions the medical men at the camp, but very limited in number at that time, had to deal with.

Temperatures in the cases, probably owing to the great prostration among the men, ran very high. Above 104° F. was not unusual, and 105° F. and even higher was frequently seen. Despite this high temperature, quinin acted, as a rule, very promptly and effectively. Fifteen grains administered to men having almost a continuous temperature of 104° F. brought it by the next morning down to 100° F., and, repeated soon, led to normal temperatures. Relapses, however, were not infrequent. This was not surprising, as most of the cases were complicated by other affections. Dysentery or slighter diarrheic conditions, catarrhal jaundice, dyspeptic troubles, and, finally, that extremely important ailment in the young soldier, homesickness, all acted as depressing agents which lowered very materially resistive vitality and delayed that recuperative reaction that one expects to find in the young.

It was difficult, too, to have the men take their medicines after symptoms had subsided, so that he was not surprised to hear of the men later sinking in the streets or being taken with the disease at their homes after their discharge from the hospital. Besides quinin in the ordinary way Dr. Washburn had tried the bimuriate of quinin and urea, by subcutaneous injection, and had had excellent results from it. It was especially useful in the cases complicated by diarrhea, in which the irritant effect of the quinin on the already irritated intestines contraindicated its administration by the mouth, and in which, besides, the giving of it in this way was unsatisfactory because of the uncertainty of how much would be absorbed.

DR. J. F. CHMELICEK said that his experience with more than 600 cases of Cuban malarial fever enabled him to confirm Dr. Thomson's opinion as to the advisability of administering quinin with some one of the spices, ginger, pepper, or capsicum. He has especially found that small doses of the essential oil of pepper have the effect of making the quinin less irritating to the stomach and of hastening its absorption, as well as of rendering its absorption more complete. With regard to perforation in typhoid fever, his experience is also confirmatory of that of Dr. Thomson. It is in the ambulatory cases, when the patients keep on their feet well into the second week of the fever, or even longer, that perforation occurs most frequently.

In conclusion, Dr. Thomson said that the main thing he wished to insist on as the result of his experience with the estivo-autumnal type of malaria, as he saw it at the hospital this fall, is that it frequently does not yield to quinin, and that some other active remedial agent needs to be combined with it. In all cases in which the disease failed to present definite paroxysms quinin alone was ineffective. The remembrance of this fact makes the way clearer for the clinical therapeutist.

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Proceedings of the Eleventh Annual Meeting, Held at Memphis, Tenn., December 6, 7, and 8, 1898.

FIRST DAY—MORNING SESSION.

THE Association met at the Gayoso Hotel under the presidency of DR. RICHARD DOUGLAS of Nashville, Tenn.

Prayer was offered by BISHOP GAILOR.

DR. ALEXANDER ERSKINE of Memphis delivered an Address of Welcome on behalf of the local profession, which was responded to by PRESIDENT DOUGLAS.

After the disposal of routine business, the scientific session was opened with a paper by DR. WILLIAM E. PARKER of New Orleans, La., entitled

GUNSHOT WOUNDS.

He described the hospital conditions in Cuba and the wounds seen by him made by the modern bullet. He spoke of some experiments made under the direction of Major and Surgeon L. A. LaGarde of the regular army, as to the relative penetrating powers of the Mauser, Krag-Jörgensen, and Springfield rifles. With ammunition of the years 1896 and 1897 the Mauser, fired at a distance of three feet from the muzzle into seasoned yellow-pine posts, would penetrate thirty-four plus inches. With ammunition of 1895 it would penetrate thirty-two plus inches; with ammunition of the past year, the Krag-Jörgensen, fired at the same distance, would penetrate twenty-four plus inches, and the Springfield would penetrate but five inches; yet many lodged Mausers were

found, and he was told by the Spanish chief-surgeon that but six lodged Krag-Jörgensens were found by them.

In speaking of wounds of special regions, he said that flesh wounds, as a rule, healed under one dressing. In the few cases that did not the sloughing was at the points of entrance and exit, and not along the whole track of the bullet. Explosive effects were not seen by any of the surgeons. He stated that he had hoped to present some statistics as to the wounds of the war, but they could not be had. Wounds of the brain did well. He had heard of at least five patients who were still alive and doing well. But one patient with a wound of the spinal cord was operated upon, and he was doing well. This patient had paralysis of both legs and of the bladder and rectum. Some spicules of bone had been removed from the cord. At the present time the patient has perfect use of the right leg and partial use of the left, and has perfect control of his bladder and rectum. He said that while he had not in any way modified his opinion that laparotomy should be done for abdominal wounds in civil life, that with the small modern bullet and lack of proper facilities this operation should not be attempted in the field unless there should be symptoms of hemorrhage. About fifty per cent. of these patients recovered without operation. Chest wounds did well, and caused but little trouble. When nerves were injured, nerve suture was not attempted on account of the rush of work, but he thought it should be attempted as soon as possible. None of the hospitals had a sufficiently large number of surgeons or hospital-corps men, but he spoke of the efficiency of those who were there.

DR. F. W. MCRAE of Atlanta, Ga., followed with a paper on

PENETRATING WOUNDS OF THE ABDOMEN, WITH REPORTS OF CASES.

At the outset, the essayist referred to a resolution passed unanimously by the Association at its Nashville meeting in 1896, to the effect that in all cases of penetrating wounds of the abdomen, it is the duty of the surgeon to make an exploratory incision so as to definitely determine whether the viscera have been injured or not. Since then a few able surgeons have dissented from this opinion. The propriety of surgical interference in cases of penetrating gunshot wounds of the abdomen will depend on one of three things: (1) The general condition of the patient; (2) dangerous internal hemorrhage; (3) wounds of the stomach or intestines large enough to permit extravasation.

Dr. McRae quoted from contributions to this subject by Senn, Nunez, Winslow, Budinger, Vaughan, Woolsey, Robson, Chaubel, Michaux, Klemm, etc., and said from the conflict of opinion and advice given by these and various other surgeons, one is at a loss to know just how to proceed in many cases. His own convictions, based on sixteen cases which he narrated, are positive. While he has the greatest admiration and respect for the surgical opinions of Senn, he should be recreant to his convictions were he to accept the proposition of non-interference laid down by Senn in his recent contributions to the subject. In most of the cases which have come under his observation where grave lesions of the abdominal viscera have existed, the symptoms of internal injury were practically *nil*, and the positive signs of grave damage almost entirely absent.

In conclusion, he reiterated his firm conviction that every case of penetrating wound of the abdomen, where there is a reasonable doubt as to injury of the abdominal viscera, should be subjected to at least an exploratory operation. This enables the surgeon to either be absolutely sure that no injury has been done to the viscera, or to repair, as far as possible, such injuries when they exist. The mortality following a simple exploratory operation *per se* is so small as not to weigh against the much greater mortality that necessarily follows the expectant plan of treatment. In the cases he had seen the general and local signs have been so misleading and enigmatical that prior to the operation a conclusion on his part as to internal conditions would have been entirely guess work.

THE PRACTICAL MANAGEMENT OF BULLET WOUNDS OF THE ABDOMINAL VISCERA.

This paper was read by DR. HORACE H. GRANT of Louisville, Ky. Observation and experience with operators coming frequently in contact with this lesion have determined that penetrating wounds of the abdomen demand laparotomy at the earliest possible moment after diagnosis and thorough inspection of the entire region endangered. It is established that not only is the mortality in untreated wounds of the abdomen almost one hundred per cent. where the intestines are perforated, and very high in wounds of the solid viscera, but it becomes less promising every advancing hour, until by the second day peritonitis sets in and destroys the hopefulness of the prospect. Within the past two years the speaker had operated in four cases. In each case the patient was seen early; in no instance later than four hours. In three resection of the intestine was necessary. Three of these patients recovered; the fourth died from septic peritonitis due to the escape of a large quantity of fecal matter before operation. Autopsy disclosed a perfect intestine.

These three papers were discussed together.

DR. W. L. ROBINSON of Danville, Va., said he has seen a good many cases of gunshot wounds of the abdomen, and nearly all of the patients died either with or without operation. Early operative interference might have saved some of them.

DR. G. S. BROWN of Birmingham said he knew of several cases of gunshot wounds of the abdomen that occurred in and around Birmingham, the patients recovering without operation. Personally, he had operated on five patients, one of whom recovered. In this case there was no perforation of the intestine. Undoubtedly diarrhea and starvation, mentioned by Dr. Parker in his paper, have something to do with the favorable results. The intestines are most liable to be perforated when full.

DR. WILLIS F. WESTMORELAND of Atlanta said the results of gunshot wounds of the abdomen on the battlefield should not be compared with those met with in civil life. It is not a question of operating, so far as fatal re-

sults are concerned, but the manner in which the operation is done.

DR. W. E. B. DAVIS of Birmingham thought that Dr. Parker's paper was not an argument against operative procedures for abdominal wounds. Surgeons on the battle-field do not have the same facilities for operating on penetrating wounds of the abdomen that they do in civil practice, and which are necessary for the proper care of cases. If a man sustains an injury to the intestine, if his abdomen is not opened death may be expected. In the case of twenty or more patients operated on by him and his brother, all died who were seen twenty-four hours after the injury. This is not an argument against operative interference, but against late operation. Statistics impress surgeons with the importance of early operation.

DR. GEORGE A. BAXTER of Chattanooga believes it is not necessary in many instances to open the abdomen in cases of gunshot wounds, and cited a number of cases of recovery without operative interference.

DR. JOHN T. WILSON of Sherman, Texas, advocated early operation in cases in which the surgeon is convinced that perforation has taken place. The character, technic, and rapidity of the operation are very important. In operating, the intestines should be exposed as little as possible.

DR. W. L. RODMAN of Louisville said that while he has pursued the practice of operating in penetrating gunshot wounds of the abdomen for the last ten years, after hearing the paper of Dr. Parker and reading the recent contributions of Senn and others, he wondered whether he as well as other surgeons may not have gone too far in operating in so many of these cases; at the same time, he does not wish to be understood as advising a masterly inactivity when the environments for operative interference are favorable.

DR. WESTMORELAND said that given a case of perforation of the intestines, particularly where there is extravasation of contents, instead of being masterly inactivity it is criminal inactivity for a surgeon not to operate.

DR. PARKER, in closing the discussion on his part, said that he had tried to make a clear distinction between the plan of treatment of gunshot wounds of the abdomen met with on the battle-field and those encountered in civil life. He is strongly opposed to laparotomy on the battle-field on account of the conditions that exist. In civil life, however, the thing to do in cases of gunshot wounds of the abdomen is to get in and out of the belly as soon as possible consistent with good work.

DR. MCRAE believes that a large proportion of the operations undertaken late for gunshot wounds of the abdomen will terminate fatally.

DR. GRANT stated that practically all patients operated on after twenty-four hours perish. It is impossible to diagnosticate perforation of the intestines with any degree of certainty. If a patient is seen within eight or ten hours after the receipt of a gunshot wound of the abdomen, under favorable surroundings, whether the bullet has penetrated the intestine or not, the skilful surgeon will not hesitate to make, at least, an exploratory operation, because it will not hurt the patient, but will probably save his life.

AFTERNOON SESSION.

DR. W. D. HAGGARD, JR., of Nashville, Tenn., read a paper, entitled

A PLEA FOR THE MORE CORRECT APPLICATION OF THE EMMET METHODS IN PLASTIC SURGERY.

The pioneer work of Sims was feelingly referred to. It is a unique circumstance in the annals of surgery that the instruments which made the feat of Emmet possible, and the fundamental principles of his success have remained unchanged. It is not so much the truth of homage to unprecedented genius, as the truth of the great principles he enunciated, and the perfection of his devices. The extension of the method of Sims in fistula to injuries of the adjacent soft parts was made by Emmet. The evolution and perfection of the operation on the cervix was traced. Dr. Haggard described the mechanics of the production of rectocele associated with the common transverse tear of the posterior vaginal wall involving the pelvic fascia, which is the essential pathology in this injury. The rational correction of this complex condition then would be not to sew the labia together, which is the popular procedure in one class of operations, nor to denude an arbitrary area of fanciful shape on the rectocele and bring the edges of the raw patch together, after the fashion of another class. It would rather be in the language of Emmet "to catch up the retracted pelvic fascia at such a point and in such a manner as to take in the slack, as it were, of the fascia throughout the pelvis." By this procedure the displaced posterior vaginal wall is certainly lifted up and drawn forward in contact with the vesicovaginal septum. As the steps of the operation advance the displaced anus is lifted upward and forward, the everted tissues at the vaginal outlet gradually rolled in and the separated levator ani muscles brought together. He accentuated the essential features in detail. The classical operation for the complex tear of the perineum is more amenable to pictorial description and he believes it more generally understood. He minutely depicted it.

THE TREATMENT OF COMPLETE RUPTURE OF THE PERINEUM BY DISSECTING OUT THE SPHINCTER MUSCLE AND ITS DIRECT UNION BY BURIED SUTURES.

DR. HOWARD A. KELLY of Baltimore, Md., read a paper on this subject, in which he said the results of the best methods of the treatment of complete tears of the perineum are not entirely satisfactory in a large percentage of cases. The control over liquid motions and flatus are, as a rule, not secured immediately, and it is usually necessary to encourage the patient by telling her that she "will have to learn to control the muscle in the course of time." Such a control, more or less perfect, is gained in the course of several months. This defect in our present procedures is due to a faulty approximation of the sphincter ends which lie buried in a pit, and are, therefore, difficult to bring into accurate, firm apposition by sutures embracing a considerable quantity of tissue surrounding the sphincter ends. Dr. Kelly proposes, therefore, the deliberate dissection and freeing of the sphincter

ends, drawing them out about one and one-half centimeters from the tissues, cutting off the scarred ends, and effecting a direct union of the freshened ends by two or three buried catgut sutures. He was led to do this operation by his experience in a case which had been operated upon six times with a result, which, judged by superficial appearances, was perfect, and yet the patient had no control over her bowel functions. He made a semilunar incision around the anterior periphery of the anus, and found the right sphincter end buried in scar tissue in the median line, while that of the left side was ectopic and attached out under the ischial tuberosity. The sphincter ends were united directly by buried catgut sutures, and the skin wound closed and union took place *per primam*. In addition to these buried catgut sutures a splinting suture of silkworm-gut is passed through the middle of the sphincter near the edges of the wound, and on up through the septum, splinting the ends together, and taking the tension off the catgut. He has since taken the hint given by this case and adopted a similar procedure in six cases of complete tear of the perineum due to confinement. Two additional patients were operated upon by Dr. W. W. Russell and one by Dr. Ramsay. In each instance there was a surprising difference between the new and older methods, noted at once in the earlier stages of the convalescence, and the patient was immediately conscious of perfect control of her functions. The bowels should never be locked up.

Great care must be taken not to leave any dead spaces in closing the remainder of the wound in the usual way in order to avoid all risk of infecting the buried sutures. He only recommends this operation to those who possess considerable skill in doing plastic operations, and in securing a snug, accurate adaptation of the parts.

In the discussion DRS. GEORGE H. NOBLE of Atlanta and J. WESLEY BOVÉE of Washington, D. C., added their testimony to the usefulness of the method described by Dr. Kelly, certain features of the technic of which they modified.

(To be continued.)

REVIEWS.

A MANUAL OF HYGIENE AND SANITATION. By SENECA EGBERT, A.M., M.D. Illustrated. Philadelphia and New York: Lea Brothers & Co., 1898.

THE work before us, which the author states is written with a view to "give a plain statement of the fundamental principles and facts of hygiene and sanitation, . . . based on American practice," fills a long felt want, for several reasons. First, books of this nature are very often too technical for every medical practitioner, for, as a rule, they embody many details of engineering which are somewhat foreign to the usual studies of medical men. Secondly, works of this description are either too cumbersome or not sufficiently explicit for general use.

We find the subjects of air, food, and water treated in a most comprehensive manner. The chapter on ventilation and heating might convey to the intelligent laity many interesting facts which could be advantageously employed, especially at this season of the year. The subject of filtration of water is ably treated and is accompanied by very good illustrations of apparatus employed, both in private as well as in city supplies. We find, further, such essential subjects as personal and school hygiene, and the removal and disposal of sewage most admirably discussed.

The book is prefaced by an interesting history of hygiene as a science. The illustrations scattered through the text, which are carefully selected and well reproduced, make the book more interesting to the reader, and a complete index enhances the value of the volume as a handy-reference work which might find a place in any professional or private library.

AN EPITOME OF HUMAN HISTOLOGY. For the use of Students in connection with lectures and laboratory work. By ARTHUR W. WEYSSE, A.M., Ph.D., Instructor in Biology, Massachusetts Institute of Technology, Boston. New York, London, and Bombay: Longmans, Green, & Co., 1898.

THE author states distinctly that this is not a text-book and that it is not intended "for those who have neglected their work and are anxious to acquire in a few hours, facts enough to pass an examination." The purpose of the book is to give to the student a brief, yet clear and definite, sketch of all the necessary data in the study of human histology, so arranged and classified that in a short time he may easily recall and memorize the lessons taught and studied. The subject is arranged and presented in a masterly manner, and cannot fail to be appreciated by every student. All of the recent advances made in histology have been recognized and incorporated and the book as it stands is a good example of our knowledge in this branch of medicine.

The book contains ninety pages, nearly twenty of which are devoted to a very full index, and is printed on very good paper. The binding is a serviceable one.

THERAPEUTIC HINTS.

For Ringworm of the Scalp.—PERKINS of London has achieved excellent results even in old chronic cases by the use of common salt. The salt, finely pulverized, is mixed with a small amount of vaselin and rubbed twice a day into the affected area (previously shaved). An eschar generally forms after two to four days of this treatment, which is then discontinued, a simple ointment being substituted. The surface then cicatrizes over and the hair begins to grow in normally.

Douche for Gonorrheal Vaginitis.—

℞	Aluminis, Sodii boratis aa	. . .	ʒi
	Quininæ sulphatis	. . .	gr. xv
	Ac. carbolici, Ol. thymi aa	. . .	gtt. xxx
	Glycerini	. . . . .	ʒvi.

M. Sig. For vaginal douche. One tablespoonful in a quart of hot water 2 or 3 times a day.—*Lutaud.*